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OF THE

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**5*a*.** Further Supplementary Estimates for the service of the Dominion for the year ending March 31, 1917. Presented by Sir Thomas White, 1916.
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**7.** Report on certified cheques, drafts or bills of exchange, dividends, remaining unpaid and unclaimed balances in Chartered Banks of the Dominion of Canada, for five years and upwards prior to December 31, 1915. Presented by Sir Thomas White, February 1, 1916. *Printed for distribution and sessional papers.*

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**9.** Abstract of Statements of Insurance Companies in Canada for the year ended December 31 1915. Presented by Sir Thomas White, April 10, 1916. *Printed for distribution and sessional papers.*

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**10*a*.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1915: Part II.—Canadian Trade with (1) France, (2) Germany, (3) United Kingdom, (4) United States. Presented by Sir George Foster, 1916. *Printed for distribution and sessional papers.*

**10*b*.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1915: Part III.—Canadian Trade with foreign countries (except France, Germany, the United Kingdom and United States). Presented by Sir George Foster, 1916. *Printed for distribution and sessional papers.*

**10*c*.** Report of the Department of Trade and Commerce for the fiscal year ended March 31, 1916: (Part IV.—Miscellaneous Information.) Presented by Sir George Foster, 1916. *Printed for distribution and sessional papers.*

**10*d*.** Report of the Grain Commissioners for Canada. (Part V.) Presented by Sir George Foster, 1916.. .. .. .. .. .. .. .. .. .. ..*Printed for distribution and sessional papers.*

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**10*f*.** Report of Trade and Commerce for the fiscal year ended March 31, 1915: Part VII.—Trade of Foreign Countries, Treaties and Conventions. Presented by Sir George Foster, 1916. *Printed for distribution and sessional papers.*

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**15b.** Report of the Veterinary Director General for the year ending March 31, 1915. Presented by Hon. Mr. Burrell, 1916.. .. .. .. .. ..*Printed for distribution and sessional papers.*

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**20a.** Canal Statistics for the season of navigation, 1915. Presented by Hon. Mr. Reid, May 17, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Printed for distribution and sessional papers.*

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**35a.** Employment for the Expeditionary Forces after the war. Presented, 1916.
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**36a.** Eighth Report of the Registrar of Boards of Conciliation and Investigations of the proceedings under "The Industrial Disputes Investigation Act, 1907," for the fiscal year ending March 31, 1915. Presented by Hon. Mr. Crothers, January 25, 1916.
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**38a.** Supplement to the Report of the Naval Service—Contributions to Canadian Biology, 1914-15. Presented by Hon. Mr. Hazen, 1916.
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**38b.** Natural History of the Herring. Presented, 1916.
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**39.** Forty-eighth Annual Report of the Fisheries Branch of the Department of the Naval Service, 1914-1915. Presented by Hon. Mr. Hazen, January 13, 1916.
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P.C. 756, dated 13th April, 1915, with reference to payment of Allowances to officers of the Royal Naval Canadian Volunteer Reserve for performance of duties which carry with them an Allowance to officers of the Royal Canadian Navy. Presented by Hon. Mr. Hazen, January 17, 1916.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**42.** Copies of Proclamations, Orders in Council and Documents relating to the European War. Presented by Sir Robert Borden, January 18, 1916.. .. .. .. .. .. .. .. ..*Not printed.*

**42a.** First Supplement to Copies of Proclamations, Orders in Council and Documents relating to the European War. Presented by Sir Robert Borden, January 18, 1916..*Not printed.*

**43.** Orders in Council relating to the European War, from 29th April, 1915, to 12th January, 1916, both inclusive. Presented by Sir Robert Borden, January 18, 1916..*Not printed.*

**44.** Copy of New Rules of Court passed by the Judges of the Supreme Court of Alberta, under the authority of Section 576 of the Criminal Code, at meeting of 27th November, 1915. Presented by Hon. Mr. Meighen, January 20, 1916.. .. .. .. .. .. .. .. ..*Not printed.*

**45.** Account of the average number of men employed on the Dominion Police Force during each month of the year 1915, and of their pay and travelling expenses, pursuant to Chapter 92, Section 6, Subsection 2, of the Revised Statutes of Canada. Presented by Hon. Mr. Doherty, January 20, 1916.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**46.** Regulations under "The Destructive Insect and Pest Act," pursuant to Section 9, Chapter 31 of 9-10 Edward VII. Presented by Hon. Mr. Burrell, January 24, 1916...*Not printed.*

**47.** Return of Orders in Council which have been published in the *Canada Gazette* and in the British Columbia *Gazette*, between 12th January, 1915, and the 31st December, 1915, in accordance with provisions of Subsection (*d*) of Section 38 of the regulations for the survey, administration, disposal and management of Dominion Lands within the 40-mile Railway Belt in the Province of British Columbia. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**48.** Return of Orders in Council which have been published in the *Canada Gazette*, between 12th January, 1915, and the 31st December, 1915, in accordance with the provisions of Section 77 of "The Dominion Lands Act," Chapter 20 of the Statutes of Canada, 1908. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. ..*Not printed.*

**49.** Return of Orders in Council which have been published in the *Canada Gazette*, between the 16th January, 1915, and the 31st December, 1915, in accordance with the provisions of "The Forest Reserves and Park Act," Section 19 of Chapter 10, 1-2 George V. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**50.** Return of Orders in Council which have been published in the *Canada Gazette*, between the 12th January, 1915, and the 31st December, 1915, in accordance with the provisions of Section 5 of "The Dominion Lands Survey Act," Chapter 21, 7-8 Edward VII. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**51.** Return of Orders in Council which have been published in the *Canada Gazette*, between the 12th January, 1915, and the 31st December, 1915, in accordance with the provisions of Chapter 47, 2 George V, entitled "The Railway Belt Water Act." Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**52.** Return of Orders in Council passed between the 16th January, 1915, and the 31st December, 1915, approving of regulations and forms prescribed in accordance with the provisions of Section 57 of the Irrigation Act, Chapter 61, Revised Statutes of Canada, 1906, as amended by Chapter 38, 7-8 Edward VII. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**53.** Return of Orders in Council passed under the provisions of Section 18 of Chapter 63, Revised Statutes of Canada, "An Act to provide for the Government of the Yukon Territory." Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .. ..*Not printed.*

**54.** Return showing lands sold by the Canadian Pacific Railway Company during the year which ended on the 30th September, 1915. Presented January 25, 1916...*Not printed.*

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**55.** Return called for by Section 88 of Chapter 62, Revised Statutes of Canada, requiring that the Minister of the Interior shall lay before Parliament, each year, a return of liquor brought from any place out of Canada into the Territories by special permission in writing of the Commissioner of the Northwest Territories. Presented by Hon. Mr. Roche, January 25, 1916.. .. .. .

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**72.** Certified copy of a report of the Committee of the Privy Council, approved by His Royal Highness the Governor General on the 7th February, 1916, appointing Robert A. Pringle, of the city of Ottawa, one of His Majesty's counsel learned in the law, and His Honour D. B. MacTavish, Judge of the County Court for the County of Carleton, a Commission, under the Inquiries Act, to conduct an inquiry into and concerning the origin of the recent disastrous fire which destroyed the Parliament Buildings at Ottawa. Presented by Sir Robert Borden, February 7, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**72a.** Report of the Royal Commission appointed to inquire into the origin of the fire which destroyed the Central Parliament Building at Ottawa, on Thursday, 3rd February, 1916. Also copy of evidence taken before the Royal Commission appointed to inquire into the origin of the fire which destroyed the Central Parliament Building at Ottawa, on Thursday, 3rd February, 1916. Presented by Hon. Mr. Rogers, May 16, 1915.
*Printed for sessional papers only.*

**73.** Copy of Order in Council, No. P.C. 162, dated 29th January, 1916,—Establishment of the rank of wireless operator in the Royal Naval Canadian Volunteer Reserve and regulations for the proper government thereof. Presented by Hon. Mr. Hazen, February 7, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**74.** Copy of Orders in Council, No. P.C. 183, dated 31st January, 1916,—Regulations governing the payment of allowance to officers of the Royal Canadian Naval Service acting as interpreters. Presented by Hon. Mr. Hazen, February 7, 1916.. .. .. .. ..*Not printed.*

**74a.** Copy of Order in Council No. P.C. 54/601, dated 16th March, 1916, authorizing payment of messing allowance to Royal Naval Reserve Officers. Presented by Hon. Mr. Hazen, March 29, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**75.** Communication from the Acting High Commissioner for Canada in London, Sir George Perley, enclosing a report on the Canadian Hospital at Dinard by Dr. Rallier du Baty, Chief Surgeon at the said hospital. Presented by Sir Robert Borden, February 7, 1916.
*Printed for sessional papers only.*

**76.** A communication from the Right Honourable A. Bonar Law, Colonial Secretary, to His Royal Highness the Governor General, enclosing a copy of the Imperial Parliamentary Debates (House of Commons, 10th January) on a resolution which was adopted by that House, as follows:—"That with a view to increasing the power of the Allies in the prosecution of the war, His Majesty's Government should enter into immediate consultation with the Governments of the Dominions in order with their aid to bring the whole economic strength of the Empire into co-operation with our Allies in a policy directed against the enemy." Presented by Sir Robert Borden, February 7, 1916.
*Printed for distribution and sessional papers.*

**77.** Correspondence between the Canadian Manufacturers' Association and the Prime Minister, 1914-1915. Presented by Sir Robert Borden, February 7, 1916.. .. .. .. ..*Not printed.*

**78.** Correspondence between the International Nickel Company and the Prime Minister. Presented by Sir Robert Borden, February 7, 1916.. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**79.** Return to an Order of the House of the 7th February, 1916, for a copy of all correspondence and reports on the claims of Sealers of British Columbia under the last treaty with the American Republic. Presented February 9, 1916.
*Printed for sessional papers only.*

**80.** Certified copy of a report of the Committee of the Privy Council, approved by His Royal Highness the Governor General on the 15th April, 1915, giving authority for the renewal, from the 31st March, 1916, of the agreement between the Dominion Government and the Province of Alberta for the service of the Royal Northwest Mounted Police in that province. Presented by Sir Robert Borden, February 10, 1916.
*Printed for sessional papers only.*

**81.** Certified copy of a report of the Committee of the Privy Council, approved by His Royal Highness the Governor General on the 21st May, 1915, giving authority for the renewal, from the 31st March, 1916, of the agreement between the Dominion Government and the province of Saskatchewan, for the services of the Royal Northwest Mounted Police in that province. Presented by Sir Robert Borden, February 10, 1916.
*Printed for sessional papers only.*

**82.** Return to an Order of the House of the 8th February, 1916, for a copy of all letters, papers, and other documents relating to the application of Wasyl Pinianski for the patent of the southwest quarter section 5, township 25, range 4, west second principal meridian, Office File No. 1752484. Presented February 16, 1916.—*Mr. MacNutt*... ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**83.** Return to an Order of the House of the 3rd February, 1916, for a copy of all affidavits, letters, telegrams and other correspondence during the years 1914 and 1915 in reference to the S.E. 7-1-13 west 2nd meridian, now the 160-acre homestead of Frank Strubell, between the Department of the Interior or the Minister, or any officer of the Department and the Land Office at Weyburn and Estevan, and with all parties who endeavoured to secure or assisted in securing homestead entry for the said land. Presented February 16, 1916.—*Mr. Turriff*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**84.** Report of the Board of Inquiry appointed to make an investigation into the increase in the cost of living in Canada and the causes which have occasioned or contributed to such result. Presented by February 16, 1916.. .. .. ..*Printed for distribution.*

**84a.** Synopsis of exhibit by the Statistical Branch, Department of Labour, laid before the Board of Inquiry into the Cost of Living, 1915. Presented by Sir Robert Borden, February 29, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Printed for distribution.*

**85.** Report of delegation representing the Government of Canada at the Ninth Annual Congress held under the auspices of the World's Purity Federation at San Francisco, July 18-24, 1915. Presented by Sir Robert Borden, February 16, 1916.. .. ..*Not printed.*

**86.** Return to an Address to His Royal Highness the Governor General, of the 7th February, 1916, for a copy of all Orders in Council, letters and correspondence which led to the convening of the conference of local governments which took place in Ottawa during the month of October last; together with all the proceedings and resolutions of the said conference. Presented February 17, 1916.—*Sir Wilfrid Laurier*.. .. .. ..*Not printed.*

**87.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams and other documents relating to the purchase by the Government of the several parcels of land now comprised in the Experimental Farm at Rosthern, Saskatchewan. Presented February 22, 1916.—*Mr. McCraney*.. .. .. .. .. .. .. .. .. ..*Not printed.*

**88.** Return to an Order of the House, of the 7th February, 1916, for a return showing the names and post office addresses of all applicants for bounty under the Deep Sea Fisheries Act, from the districts of Ecum Secum, Marie Joseph, Spanish Ship Bay, and Liscombe, county of Guysborough, N.S., for the years 1912, 1913, 1914 and 1915, distinguishing between applications that have been accepted and the bounty paid, and those that have been rejected, and also the reasons for such rejections, if any. Presented February 22, 1916.—*Mr. Sinclair*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**89.** Return to an Order of the House of the 3rd February, 1916, for a return showing the fractional areas of homestead lands, or otherwise, in the province of Saskatchewan, sold in the year 1915, the name of the purchaser, and the price paid in each case. Presented February 22, 1916.—*Mr. Martin (Regina)*.. .. .. .. .. .. .. ..*Not printed.*

**90.** Return to an Order of the House, of the 7th February, 1916, for a return showing a copy of the prospectus, rates of interest, the effective interest, the net yield, commission charges, printing charges and other charges, in connection with the Government Domestic Loan of one hundred million dollars, and also in connection with the loan of forty-five million dollars made at New York in 1915. Presented February 22, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed*

**91.** Return to an Order of the House of the 7th February, 1916, for a return showing the number of subscribers in the Government Domestic Loan of one hundred million dollars which were in the sum of $1,000 or under, and the number of other subscriptions in multiples of $1,000. Presented February 22, 1916.—*Mr. Maclean (Halifax)*.
*Not printed.*

**92.** Return to an Order of the House of the 8th March, 1915, for a return showing:—1. From how many firms or private individuals the Government, or any Department of the Government, has ordered trousers, breeches, and pantaloons since the 1st of July, 1914? 2. The names of these firms? 3. How many trousers, breeches and pantaloons have been ordered from each firm? 4. How many each firm has delivered up to date? 5. How many each firm has yet to deliver? 6. The price each firm is receiving for these trousers, breeches and pantaloons. Presented February 24, 1916.—*Mr. Chisholm (Inverness)* .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**93.** Return to an Order of the House of the 8th March, 1915, for a return showing the number of appointments to the Inside Service and to the Outside Service since October, 1911, of persons resident in the county of Wright, the number of dismissals from the service since October, 1911; the number of resignations from the service since above date; with the names of parties at whose request such resignations, if any, were tendered. Presented February 24, 1916.—*Mr. Devlin*.. .. .. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*

**94.** Return to an Order of the House of the 8th April, 1915, for a return showing:—1. The names of the persons who have successfully passed the Civil Service examination in the province of Quebec since the establishment of the Civil Service Commission. 2. The number of such persons who have been called upon to enter the Civil Service. 3. The number in each grade of those who have pased such examinations with success. Presented February 24, 1916.—*Mr. Boulay*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**95.** Return to an Order of the House of the 3rd February, 1916, for a copy of all documents, papers and telegrams in any way referring to the application of Aenas McKinnon, of Iron Mines, Inverness County, for the Fenian Raid Veteran Bounty. Presented February 24, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**95***a*. Return to an Order of the House of the 14th February, 1916, for a copy of all telegrams, letters, petitions and documents of any kind, referring in any way to the application of Anes or Angus McKinnon, of Iron Mines or Orangedale, Inverness County, for the Fenian Raid Bounty. Presented March 3, 1916.—*Mr. Chisholm (Inverness)*. *Not printed.*

**96.** Return to an Order of the House of the 15th March, 1915, for a copy of the claim of Captain Stephen Paul, owner of the steamer *Rhoda*, for the destruction of his ship, as a wreckage, by the Department of Marine, and of all correspondence with regard to the same. Presented February 24, 1916.—*Sir Wilfrid Laurier*.. .. .. .. ..*Not printed.*

**97.** Return to an Order of the House of the 29th March, 1915, for a copy of all letters and telegrams, or any other written communications which passed between the Minister of Railways and Canals and J. C. Douglas, Esq., M.P.P., of Glace Bay, Nova Scotia, between the 1st of January and the last of December, 1914, and of all letters and telegrams between the Minister of Customs and Public Works, and the Postmaster General, and the said J. C. Douglas during the above period, in respect to the dismissal, appointment or restoration to office of Government officials. Presented February 24, 1916.—*Mr. McKenzie*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**98.** Return to an Order of the House of the 3rd February, 1916, for a copy of all reports upon the depths of water in the different locks in the East River of Pictou, improvements, and of all correspondence and recommendations in regard to changes on the plans therefor. Presented February 24, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. ..*Not printed.*

**98***a*. Supplementary return to an Order of the House of the 3rd February, 1916, for a copy of all reports upon the depths of water in the different locks in the East River of Pictou, improvements, and of all correspondence and recommendations in regard to changes on the plans therefor. Presented March 13, 1916.—*Mr. Macdonald*.. .. .. .. ..*Not printed.*

**99.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams, petitions and other papers relative to the granting of a Conciliation Board to the employees of the Acadia Coal Company, in the county of Pictou, in the autumn of 1915. Presented February 24, 1916.—*Mr. Macdonald*.. .. .. .. .. .. ..*Not printed.*

**100.** Return to an Order of the House of the 1st March, 1915, for a return showing the number of miles of telegraph lines, and the locations, erected in the county of Inverness, each year since 1896, to the present day, with the cost of each line. Presented February 24, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**101.** Return to an Order of the House of the 3rd February, 1916, for a copy of all tenders, letters, telegrams and contracts relative to a mail contract from Noel to Maitland, in the county of Hants, and relative to the warding of the same under contract. Presented February 24, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**102.** Return to an Order of the House of the 22nd March, 1915, for a copy of the petition addressed to the Post Office Department for the establishment of the rural mail delivery route in the county of Shefford, known as Warden No. 1, and of all letters, telegrams reports and other communications connected therewith. Presented February 24, 1916.—*Mr. Boivin*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**103.** Return to an Order of the House of the 9th February, 1916, for a return showing the different rural mail routes in the Strathcona constituency, their location and date of establishment, and all rural routes under consideration at the present time. Presented February 24, 1916.—*Mr. Douglas*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**103***a*. Return to an Order of the House of the 16th February, 1916, for a return showing the location of all rural mail routes in the present constituency of Strathcona, the date of their inception, and the location of routes at present under consideration. Presented February 24, 1916.—*Mr. Douglas*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**104.** Return to an Order of the House of the 25th March, 1915, for a copy of all letters, papers, petitions, reports and other documents relating to the establishment of a rural mail delivery route, for the purpose of giving postal service to the districts of Hodson and Toney Mills, county of Pictou. Presented February 24, 1916.—*Mr. Macdonald.* *Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**105.** Return to an Order of the House of the 3rd February, 1916, for a copy of all correspondence, letters, telegrams and memorials received by the Honourable Postmaster General or the Right Hon. Sir Robert L. Borden, since January 1, 1912, relating to the contract for carrying the mail across Lemon Ferry, in the county of Richmond, N.S., and also of all replies thereto. Presented February 24, 1916.—*Mr. Kyte*.. .. .. .. .. ..*Not printed.*

**106.** Return to an Order of the House of the 7th February, 1916, for a return showing how many rural mail delivery routes have been opened during the last fiscal year, in what counties, and at what cost in each county. Presented February 24, 1916.—*Mr. Lemieux. Not printed.*

**107.** Return to an Order of the House of the 7th February, 1916, for a copy of all correspondence between the Department of Marine and Fisheries, or any department of Government, and the Pilot Commissioners of the harbour and district of St. Anns, in the county of Victoria, during the years 1914 and 1915, in respect to the removal or dismissal of Daniel Buchanan from the office of pilot of said harbour or district. Presented February 24, 1916.—*Mr. McKenzie*.. .. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*


**117.** Return to an address to His Royal Highness the Governor General of the 7th February, 1916, for a copy of all evidence, reports, memoranda or Orders in Council, relative to the retirement or dismissal from the customs service at the Port of Halifax, of A. J. Crosby, Thomas Lynch and J. B. Naylor. Presented February 25, 1916.—*Mr. Maclean (Halifax)* .. .. ..

## CONTENTS OF VOLUME 28—*Continued.*

**131.** Return to an Order of the House of the 7th February, 1916, for a copy of all letters, telegrams, evidence of witnesses at the investigation, and reports thereon, in relation to the claim of Alexandre D. Doucet, of Beresford, N.B., for cattle killed on the Intercolonial Railroad on May 25, 1915. Presented March 1, 1916.—*Mr. Turgeon.*
*Not printed.*

**132.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams, correspondence and agreements between the Department of Railways and Canals, and any official thereof, including the officials of the Intercolonial Railway, regarding the installation of the McQueen Siding, so-called, at Shediac, in the province of New Brunswick, and the subsequent removal thereof. Presented March 1, 1916.—*Mr. Carvell*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*


**141.** Return to an Order of the House of the 7th February, 1916, for a return of all sums of money expended, respectively, during the present fiscal year by the Department of Public Works, chargeable to capital account, for public buildings and harbours and rivers, by provinces, designating in detail the purposes of such expenditure. Presented March 1, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**142.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams and other documents in connection with the purchase of a site for the post office building at Bear River, N.S. Presented March 1, 1916.—*Mr. Law*,.. .. .. ..*Not printed.*

**143.** Return to an Order of the House of 7th February, 1916, for a copy of all letters, papers, telegrams, pay-sheets, pay-rolls, receipts and documents of all kinds whatsoever in connection with the extension or repairs on the public breakwater at Port Morien, in South Cape Breton, during 1915. Presented March 1, 1916.—*Mr. Carroll*.. .. ..*Not printed.*

**144.** Return to an Order of the House of 16th February, 1916, for a copy of all letters, telegrams and correspondence between the Department of Marine and Fisheries, or any official thereof, and any person or persons in reference to the proposed retirement from office of the present keeper of the lighthouse at Cape Jourmain, in the county of Westmorland. Presented March 1, 1916.—*Mr. Copp*.. .. .. .. .. .. .. .. .. ..*Not printed.*

**145.** Return to an Order of the House of 7th February, 1916, for a copy of all correspondence between the Department of Militia and Defence or any of its branches, and the Department of Agriculture, in reference to the using of the immigration or quarantine buildings at McNab's Island and Lawlor's Island, Halifax, N.S., for military purposes, and particularly for their use by the 63rd Regiment, Overseas Contingent. Presented March 1, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**146.** Return to an Order of the House of 7th February, 1916, for a return showing the names of all medical officers appointed and employed for immigration or quarantine purposes at Halifax, St. John, Quebec, Montreal, Toronto, Winnipeg, Regina, Calgary, Edmonton, Vancouver and Victoria, together with the date of appointment of each, their salary, and in each case designating whether they or any of them are still in the service of the Government, and when not, the date when the service ceased. Presented March 1, 1916. —*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**147.** Return to an Order of the House of the 3rd February, 1916, for a return showing:—1. The names of the different tenderers for the carrying of the mails from the rural boxes established in the counties of l'Assomption and Montcalm down to the present day. 2. The figure of each of such contracts, and the name of the tenderer to whom each of such contracts has been awarded, and for what sum. 3. If any contracts were given without tender. If so, to whom, and for what amount. Presented March 2, 1916.— *Mr. Seguin*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**148.** Return to an Order of the House of the 21st February, 1916, for a copy of all correspondence and telegrams exchanged between the Labour Department and the workingmen at Thetford Mines prior, during, or after the last strike in that vicinity, and of all other papers relating thereto. Presented March 2, 1916.—*Mr. Verville*.. .. .. ..*Not printed.*

**149.** Fenian Raid Bounties—to whom paid in Queens County, N.S.—(*Senate*).. ..*Not printed.*

**150.** Return to an Address to His Royal Highness the Governor General, of the 3rd February, 1916, for a copy of all Orders in Council passed since 4th August, 1914, dealing with members of the Canadian Expeditionary Forces in the following particulars: Pensions to partially or totally disabled soldiers or their dependents; money allowances or other provision made for the support or care of partially or totally disabled returned soldiers; and pay allowances or other consideration to dependents of soldiers while on active service, and after their return from active service, because of disablement from any cause. Presented March 3, 1916.—*Mr. Oliver*.. .. .. .. ..*Printed for sessional papers only.*

**151.** Return to an Order of the House of the 3rd February, 1916, for a return showing the names of all medical officers employed and designated in the years 1914 and 1915, in the examination of recruits in the county of Pictou, and of any changes in the list of said officers in said period. Presented March 3, 1916.—*Mr. Macdonald*.. ..*Not printed.*

**152.** Return to an Order of the House of the 4th March, 1915, for a return showing the names and addresses of all persons in Annapolis and Digby Counties, Nova Scotia, to whom the bounty under the Fenian Raid Volunteer Bounty Act has been paid; the names and addresses of all persons from said counties whose applications have been rejected; and the names and addresses of all applicants from said counties whose applications have not been disposed of. Presented March 3, 1916.—*Mr. Law*.. .. .. .. ..*Not printed.*

**153.** Return to an Order of the House of the 19th February, 1915, for a return showing the names and addresses of all persons in South Cape Breton, Nova Scotia, who have been paid Fenian Raid Bounty; the names and addresses of all persons in South Cape Breton, N.S., who have made application for said bounty and who have not yet received it. Presented March 3, 1916.—*Mr. Carroll*.. .. .. .. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**154.** Return to an Order of the House of the 1st March, 1915, for a return showing the names and addresses of all persons who received bounty. Raid Bounty was paid in the county of Halifax, N.S., to date. Presented March 3, 1916.—*Mr. Maclean (Halifax).* *Not printed.*

**155.** Return to an Order of the House of the 31st March, 1915, for a copy of all applications received for Fenian Raid Bounty from residents of the county of Hants, N.S.; also the names of persons who have been paid the hounty and those who have been refused it in said county; with the reasons for refusal, and showing the number of applications that have not yet been dealt with. Presented March 3, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*


**168.** Return to an Order of the House of the 16th February, 1916, for a copy of all letters, petitions, correspondence and telegrams, exchanged between the Government, its resident engineer of the district, and all other persons concerning the construction of a bridge between Ile Perrot and Ste. Ann de Bellevue, and Ile Perrot and Vaudreuil. Presented March 7, 1916.—*Mr. Boyer*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**169.** Return to an Order of the House of the 21st February, 1916, for a copy of all letters and correspondence between A. Bellemare, Esq., M.P., and the Government, or any member thereof, in connection with the construction of the post office at Louiseville. Presented March 7, 1916.—*Mr. Gauvreau*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**170.** Return to an Order of the House of the 21st February, 1916, for a return showing the amounts spent for the furnishing of the office of the Hon. E. Patenaude, Minister of Inland Revenue; with a copy of all invoices. And also a statement of the amounts spent for the furnishing of the office of the Hon. W. B. Nantel, when Minister of Inland Revenue; with a copy of all invoices. Presented March 7, 1916.—*Mr. Lanctot.*
*Not printed.*

**171.** Return to an Order of the House of the 3rd February, 1916, for a copy of all documents, title deeds, papers, notarial deeds or private writings in connection with the sale, donation or transfer, by the estate of Alex. Fraser, of Rivière du Loup, to the Government or the Railway Department, for the Intercolonial, the lot of land or part of the lot of land, at the east of the Intercolonial bridge at Rivière du Loup, at a place called Gauvreau Yard; also of all correspondence in this connection. Presented March 7, 1916.—*Mr. Gauvreau*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**172.** Report of the Federal Plan Commission on a general plan for the cities of Ottawa and Hull, 1915. Presented by Sir Robert Borden, March 10, 1916.. .. .. .. .. ..*Not printed.*

**173.** Return to an Order of the House of the 3rd February, 1916, for copies of all telegrams, letters, petitions, correspondence and other documents whatsoever relating to the post office and the postmaster of the Parish of St. Esprit, in the county of Montcalm, from October, 1911, to the present day. Presented March 10, 1916.—*Mr. Seguin.*
*Not printed.*

**174.** Return to an Order of the House of the 16th February, 1916, for a copy of all telegrams, letters, petitions and documents of all kinds, in any way referring to the awarding of the contract for carrying the mail from Inverness to Margaree Harbour. Presented March 10, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**175.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, papers, telegrams and documents of all kinds whatsoever in connection with the tenders and awarding of the contract for carrying the mails between the tram cars and the post office at Glace Bay, South Cape Breton. Presented March 10, 1916.—*Mr. Carroll.*
*Not printed.*

**176.** Return to an Order of the House of the 7th February, 1916, for a copy of all papers, memoranda, correspondence, reports, etc., in connection with the dismissal of John E. Hallamore, as postmaster at Upper New Cornwall, Lunenburg County, N.S. Presented March 10, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**177.** Return to an Order of the House of the 16th February, 1916, for a copy of all telegrams, letters, petitions, and of all documents of all kinds in any way referring to the awarding of the contract for carrying the mail to Eastern Harbour and Pleasant Bay. Presented March 10, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .. .. .. .. .. ..*Not printed.*

**178.** Return to an Order of the House of the 21st February, 1916, for a detailed statement of all war orders obtained by the Dominion Steel Corporation of Sydney, Nova Scotia. Presented March 10, 1916.—*Mr. Lemieux*.. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**179.** Return to an Order of the House of the 21st February, 1916, for a copy of the war orders given to the Montreal Street Railway Company. Presented March 10, 1916.— *Mr. Fortier*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**180.** Report of the International Commission pertaining to the St. John river. Presented by Hon. Mr. Rogers, March 10, 1916.. .. .. .. .. .. ..*Printed for sessional papers only.*

**181.** Return to an Order of the House of the 21st February, 1916, for a detailed statement of all the wrecks which have taken place on the St. Lawrence river from 1867 until 1916, inclusive. Presented March 13, 1916.—*Mr. Lemieux*.. .. .. .. .. .. .. .. ..*Not printed.*

**182.** Return to an Address to His Royal Highness the Governor General of the 3rd February, 1916, for a copy of all Orders in Council, letters, telegrams, reports and other documents regarding the proposed public building in Prince Rupert for post office and other purposes, and regarding the land proposed for such public building and the purchase of such land. Presented March 13, 1916.—*Mr. Knowles*.. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**183.** Return to an Address to His Royal Highness the Governor General of the 7th February, 1916, for a copy of the Order in Council or departmental order dismissing Mr. Bayfield from the position of Superintendent of Dredging in British Columbia; and also a copy of the Order in Council or departmental order appointing J. L. Nelson in his place. Presented March 13, 1916.—*Mr. Pugsley*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*

**194.** Return to an Order of the House of the 6th March, 1916, for a copy of all telegrams, letters, petitions and documents of all kinds referring in any way to the application of Mrs. Flora McIntyre, of River Dennis, Inverness County, N.S., for the Fenian Raid Veteran Bounty of her late husband, Angus McIntyre, late of River Dennis. Presented March 20, 1916.—*Mr. Chisholm (Inverness)*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**195.** Return to an Order of the House of the 13th March, 1916, for a return showing:—1. The names, dates of appointment, post office addresses at time of appointment, and former occupations of the censors employed by the Militia Department at Louisburg and North Sydney, Nova Scotia. 2. The names of all the said censors who are also decoders, and the names and addresses of all who are employed in the censorship service at the above points. 3. The amount paid to each censor or decoder since the 4th of August, 1914, up to the 1st February, 1916, or to any party or person in connection with the censorship or decoding services at the above places. Presented March 20, 1916.—*Mr. McKenie.*
*Not printed.*

**196.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams, agreements and all other papers relative to the creation of a Board of Conciliation, during the year 1915, under the Industrial Disputes Investigation Act in regard to the employees of the Nova Scotia Steel Company, in the county of Pictou. Presented March 20, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**197.** Return to an Order of the House of the 6th March, 1916, for a list of the employees in the Dominion Police Force, with the salary of each of them. Presented March 20, 1916. —*Mr. Boulay*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**198.** Return showing:—1. Whether the Government have taken cognizance of the following article published in the Montreal "Gazette" on November 1, 1915:—"Canadian Help Comes from Sale of Gift Flour. Foodstuffs not Needed by the English Poor were Bought for Belgian Relief.—Funds to Aid East Coast.—Hon. Walter Long Suggested to Canadian Government that $750,000 be Allotted, and Latter Agreed.—(Special cable from the "Gazette's" resident staff correspondent.)

"London, October 31,—'Canada's aid to the east coast towns of England, which are suffering through the war, is the subject of some misconception,' said Sir George Perley to-day. In a statement in the Commons, Hon. Walter Long said that the necessary funds for a Government scheme of help for hotel and lodging house keepers had been generously provided by the Canadian Government. This gave rise to the idea that the Dominion was taking a new step, but the fact is that no money is coming from Canada. Of the flour sent by Canada a year ago to relieve distress in England, very little was distributed, as poverty was in no way abnormal. Some 400,000 bags of this flour were transferred to the American committee for Belgian relief, which purchased them. The money paid for this flour being in the hands of the Local Government Board, Hon. Walter Long, as President of the Board, suggested to Sir George Perley that this might be utilized for the relief of the east coast towns where the season had been ruined owing to the lack of railway facilities and the disinclination of the public to visit the east coast because of the possibility of German naval or aerial raids. The Dominion Government acquiesced in this proposal, and the sum of $750,000, part of the proceeds of the sale of the flour, has now been allotted for this purpose. Canada's generosity will therefore go to alleviate the distress of a large number of better-class people, who are direct sufferers from the war, instead of the destitute poor, for whom it was intended, but who, it develops, were not in need of it." 2. Whether the said article is accurate. If not, in what respect it is inaccurate. Presented March 20, 1916.—*Mr. Papineau.*
*Not printed.*

**198*a*.** Return showing:—1. Whether the Government is aware that the following extract from an article was published on the 12th January, 1915, in the Montreal "Gazette":—

"Distress Caused in England by War is Negligible.—Comparatively Small Portion of Colonial Gifts Used for National Relief.—Much Went to Belgians.—War Office also took Large Share.—Salvation Army has Scheme Requiring Canadian Co-operation.—(Special cable from the "Gazette's" resident staff correspondent.)

"London, January 11.—Very satisfactory evidence of the comparative absence in England of any distress caused by the war is furnished by a report on the special work of the Local Government Board arising out of the war, which was issued to-day as a White Paper. The action by Noel Kershaw, dealing with the disposition of the gifts from the Colonies, shows that only a small part of the goods allocated has been required for relieving the distress of civilians.

"The following is the disposition of the 940,530 bags of flour received from Canada: To the local committees for the relief of distress, 90,474; to the Belgian Refugees Committees, 1,691; transferred to the War Office, 99,760; further offer to the War Office, 300,000; to the Belgian Relief Commission, 443,886; sold, owing to damage, 4,719." 2. Who had charge of accepting delivery and the shipping of this flour. 3. Whether the Government have any information of the shortage of 59,430 bags of flour, alleged in said article. If not, what became of the flour that was short. Presented March 20, 1916.—*Mr. Papineau*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**199.** Return to an Order of the House of the 6th March, 1916, for a return showing the amounts contributed from the constituency of Medicine Hat for machine guns, and by whom contributed or forwarded. Presented March 21, 1916.—*Mr. Buchanon*.. ..*Not printed.*

**200.** Return to an Order of the House of the 13th March, 1916, for a copy of all letters, petitions, recommendations and other documents in the possession of the Post Office Department relating to the appointment of the postmaster at West Roachdale, Guysborough County, Nova Scotia, to take the place of J. H. McGuire, deceased. Presented March 21, 1916.—*Mr. Sinclair*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**201.** Return to an Order of the House of the 28th February, 1916, for a return showing in detail the payment or payments amounting to $647.50, paid to P. A. Stoddart, fishery guardian, Shelburne County, N.S., during the year ending March 31, 1915. Presented March 21, 1916.—*Mr. Kyte*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**202.** Return to an Order of the House of the 28th February, 1916, for a copy of all correspondence, letters, telegrams and documents of all kinds relating to the chartering of the vessel *Starling*, by the Department of Marine and Fisheries. Presented March 21, 1916. *Mr. Kyte*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**203.** Return to an Order of the House of the 7th February, 1916, for a copy of all documents, letters, messages, correspondence and reports concerning a conference between the Minister of Agriculture and certain representatives of the Mennonite Church in or about July, 1873, and referred to in a certain letter dated 23rd July, 1873, signed by P. M. Lowe, Secretary of the Department of Agriculture, and addressed to Messrs. David Klassen, Jacob Peters, Heinrich Wiehe and Cornelius Toews, delegates from Southern Russia. Presented March 21, 1916.—*Mr. McCraney*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**204.** Return to an Order of the House of the 13th March, 1916, for a copy of all letters, telegrams, petitions, memorials and other documents relating to the subsidizing by the Government of the construction of ships in British Columbia, or of ships when built; or as to the laying down or constructing or assisting in the construction in British Columbia of twenty-five ships by the Government, or as to assisting by subsidies or otherwise in the construction of ships in the Dominion. Presented March 23, 1916.—*Mr. Macdonald.* *Not printed.*

**205.** Return to an Order of the House of the 13th March, 1916, for a copy of the affidavit of David W. McLean, Windsor, N.S., to whom Warrant No. 25737 was issued for Fenian Raid Bounty, and also a copy of all correspondence and other documents relating to the payment of the same. Presented March 23, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**206.** Return to an Order of the House of the 9th March, 1916, for a return showing:—1. The amount collected in wharfage on goods landed on Government wharves in the county of Victoria, at Neils Harbour, Ingonish, Englishtown, South Gut, Baddeck, Little Narrows, Nyaiga, and Big Bras d'Or. 2. The amount collected at each of the above places, by whom collected, and how much returned to the Government in each case. Presented March 27, 1916.—*Mr. McKenzie*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**207.** Return to an Order of the House of the 20th March, 1916, for a return showing:—The names of the 54 Canadian officers employed in the Canadian Pay and Record Office, London, and amounts per month paid to each of them. Presented March 27, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**208.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams, petitions, directions and other documents relative to the surveys for a railway under the Railway Department, which have been carried on during the past summer, at points east and west from Sunnybrae, in the county of Pictou. Presented March 27, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**209.** Return to an Order of the House of the 21st February, 1916, for a copy of all papers, agreements, letters, telegrams and other documents relating to the proposal to purchase, lease, or use of, the railway known as the Vale Railway, county of Pictou, and to the operation of the same by the Railway Department. Presented March 27, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**210.** Return to an Order of the House of the 7th February, 1916, for a return showing the number and purpose of all commissions appointed by the Government since 1911, and the cost of each, together with names of the various members of such commissions. Presented March 27, 1916.—*Mr. Pardee*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**211.** Return to an Order of the House of the 6th March, 1916, for a copy of all correspondence, letters, telegrams and documents relating to the dismissal or resignation of Dr. W. T. Patton from the service of the Veterinary Inspection Branch of the Department of the Interior, and his re-appointment and his later dismissal or resignation. Presented March 27, 1916.—*Mr. Buchanan*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**211a.** Return to an Order of the House of the 3rd April, 1916, for a copy of all correspondence, letters, telegrams and documents relating to the dismissal or resignation of Dr. W. T. Patton, from the service of the Veterinary Inspection Branch of the Department of Agriculture at Coutts, Alberta, and his re-appointment and later dismissal or resignation. Presented May 10, 1916.—*Mr. Buchanan*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**212.** Return to an Order of the House of the 28th February, 1916, for a copy of all accounts, telegrams, letters, bills of costs and other documents relating to the case of J. P. Dionne against the King, before the Exchequer Court, in which case Mr. Leo Bérube was attorney and Mr. E. H. Cimon was counsel, both being lawyers of Fraserville. Presented March 27, 1916.—*Mr. Gauvreau*.. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed*

**212a.** Return to an Order of the House of the 5th April, 1916, for a copy of all telegrams and letters from Leo Berube, lawyer, M.P.P., to the Minister of Justice, relating to the production of the official and public documents asked for by C. A. Gauvreau, M.P., in the case of J. P. Dionne vs. The King, and of any answers of the Minister of Justice to such telegrams and letters. Presented April 10, 1916.—*Mr. Gauvreau*.. .. ..*Not printed*

**213.** Return to an Address to His Royal Highness the Governor General, of the 7th February, 1916, for a copy of all correspondence with the Imperial authorities in connection with the purchase of horses, and the prohibiting of the export of horses. Presented March 27, 1916.—*Sir Wilfrid Laurier*.. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**214.** Return to an Order of the House of the 1st March, 1916, for a copy of all correspondence, telegrams, reports and documents of all kinds relating to the visits of a fair wage officer to New Glasgow, N.S., in connection with the schedule of wages of men employed in works making shells at that place. Presented March 28, 1916.—*Mr. Macdonald.*
*Not printed.*

**215.** Copy of Order in Council P.C. No. 634, dated 24th March, 1916, *re* the prohibition of the exportation of certain goods including nickel, nickel ore and nickel matte, to certain foreign ports. Presented by Sir Robert Borden, March 28, 1916.
*Printed for sessional papers only.*

**216.** Return to an Order of the House of the 6th March, 1916, for a copy of all correspondence, accounts, vouchers, memoranda, etc., relating to the construction of a launch way and boat house at Bear Cove Beach, Halifax County, N.S., and completed in 1914. Presented March 29, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. ..*Not printed.*

**217.** Return to an Order of the House of the 6th March, 1916, for a detailed statement of the expenditure last year at McNair's Cove, Nova Scotia, giving the names of the workmen, the number thus employed, the amount paid to each; also the amount paid for supplies and material, and the names of the persons to whom the same was paid. Presented March 29, 1916.—*Mr. Chisholm (Antigonish)*.. .. .. .. .. .. .. .. .. ..*Not printed.*

**218.** Return to an Order of the House of the 6th March, 1916, for a copy of all correspondence, accounts, vouchers, receipts, etc., in connection with the construction of a wharf at Shad Bay, Halifax County, N.S., in 1914 and 1915. Presented March 29, 1916.—*Mr. Maclean (Halifax)*.. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**219.** Return to an Order of the House of the 16th March, 1916, for a return showing:—1. Whether the Government has received any complaints as to the manner of supplying clothing to the Royal Military College, or as to its fit, workmanship or materials employed, or as to any delay in furnishing the cadets with clothing. 2. If so, from whom such complaints have been received. 3. On what grounds. 4. What form the complaint was in. 5. The nature of the complaint. 6. If the Government is aware as to whether or not there has been dissatisfaction as to the fit, workmanship and materials employed, or as to any delay in furnishing the cadets with clothing. 7. If it is true, as alleged, that the late Commandant of the Royal Military College, Colonel Crowe, before he left, recommended a change of system for the supply of clothing, and outlined the features of such a system. 8. If so, the details of the plan suggested. 9. To what extent the plan suggested by Colonel Crowe was adopted. If not adopted, why not. 10. Whether the present Commandant of the Royal Military College made any suggestions as to a change in the system of supplying clothing to the cadets. 11. If so, the changes which he suggested. Presented March 30, 1916.—*Mr. Carvell.*
*Not printed.*

**220.** Escape of alien enemies from detention camps at Amherst, N.S.—(*Senate*)..*Not printed.*

**221.** Return to an Order of the House of the 21st February, 1916, for a copy of all letters, petitions, papers, telegrams, tenders and other documents relating to the establishment of a rural mail route from Alma, through Sylvester and Loch Broom, and as to the closing of the post offices at Sylvester and Loch Broom. Presented March 31, 1916.—*Mr. Macdonald*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**222.** Return to an Order of the House of the 3rd February, 1916, for a copy of all petitions, letters, papers, telegrams, tenders and other documents relating to the establishment of rural mail route from Scotsburn to North Scotsburn, Rogers Hill and Hardwood Hill, and as to the closing of any post offices on said route. Presented March 31, 1916.—*Mr. Macdonald*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*


**232.** Return to an Order of the House of the 15th March, 1916, for a copy of all letters, telegrams and petitions in the possession or under the control of the Post Office Department having reference to the dismissal of Postmaster McRitchie at North River Centre, Victoria County, Nova Scotia, and to the appointment of Neil McLeod in his place. Presented April 5, 1914.—*Mr. McKenzie*.. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**233.** Return to an Order of the House of the 27th March, 1916, for a copy of all petitions, correspondence, telegrams, recommendations and other papers or documents in the possession of the Postmaster General or his department, relating to the dismissal of James Hall, Postmaster at Milford Haven Bridge, Guysborough County, Nova Scotia, and the appointment of Guy O'Connor, as his successor. Presented April 5, 1916.— *Mr. Sinclair. Not printed.*

**234.** Return to an Order of the House of the 7th February, 1916, for a report showing the apportioning of electoral polling divisions in Manitoba, made by judges under authority of the Dominion Elections Act, 7-8 Edward VII, Chapter 26. Presented April 5, 1916.— *Sir Wilfrid Laurier*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**235.** Return to an Order of the House of the 23rd February, 1916, for a copy of all profiles, reports, correspondence and all documents concerning the construction of a viaduct at Amqui, on the intercolonial Railway, at the place called Traverse Dubé, Dubé Crossing; also of the plans of properties belonging to the Intercolonial Railway at Amqui, and of the land leased to the Municipality of Amqui, with a copy of the lease affecting such land. Presented April 5, 1916.—*Mr. Lapointe* (*Kamouraska*).. .. .. .. ..*Not printed.*

**236.** Return to an Order of the House of the 20th March, 1916, for a return showing the number of horses bought for remounts in Alberta, the persons from whom they were purchased, and the amount paid for each horse. Presented April 6, 1916.—*Mr. Buchanan. Not printed.*

**237.** Return to an Order of the House of the 15th March, 1916, for a return showing:—1. Who has been furnishing food, clothing and other necessary supplies to the soldiers at North Sydney and Sydney Mines, since the 4th August, 1914, to the 1st February, 1916. 2. The names and amounts paid to each, and amounts due to each on 1st February, 1916, over and above what has already been paid. 3. Whether the said supplies of all kinds were obtained or called for by public tender. If so, how the tenders were called, and who the tenderers were. 4. If the contracts for such supplies were always given to the lowest tenderer. 5. The names of those who tendered, and the figures of the tenders in each case. 6. The different methods by which tenders were invited, and for what classes of merchandise or supplies. Presented April 6, 1916.—*Mr. McKenzie*.. ..*Not printed.*

**238.** Order in Council No. P.C. 680, dated 23rd March, 1916, respecting the application of the Industrial Disputes Investigation Act, 1907, in the case of disputes between employers and employees affecting the delivery of war supplies. Presented by Hon. Mr. Roche, April 6, 1916.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**239.** Return to an Order of the House of the 13th March, 1916, for a copy of all the evidence taken by the Commission appointed to inquire into claims for damages made against the Militia Department in the town of Sydney Mines, Nova Scotia, and of the report made upon each claim or case, said claims being for damages to lands and other property. Presented April 7, 1916.—*Mr. McKenzie*.. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**240** Return to an Order of the House of the 1st March, 1916, for a copy of all letters, correspondence and telegrams between the Speaker, the Clerk of the House of Commons, the Civil Service Commission and the Minister of Finance in regard to the proposed appointment of Mr. H. Crossley Sherwood, as Assistant Clerk of Routine and Records, from 1st October, 1914, down to the present date. Presented April 7, 1916.—*Mr. Turriff. Not printed.*

**240a.** Supplementary Return to an Order of the House of the 1st March, 1916, for a copy of all letters, correspondence and telegrams between the Speaker, the Clerk of the House of Commons, the Civil Service Commission and the Minister of Finance in regard to the proposed appointment of Mr. H. Crossley Sherwood, as Assistant Clerk of Routine and Records, from 1st October, 1914, down to the present date. Presented April 10, 1916.— *Mr. Turriff*.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**241.** Return to an Order of the House of the 20th March, 1916, for a copy of all recommendations, letters, telegrams and correspondence relating to the recent appointment of a lightkeeper at Arisaig, N.S. Presented April 7, 1916.—*Mr. Chisholm* (*Antigonish*). *Not printed.*

**242.** Return to an Order of the Senate dated 31st March, 1916:—For a copy of all papers, letters and all correspondence regarding the passport granted to W. F. Bauman, an alien enemy. The said Bauman is a Bavarian.—(*Senate*).. .. .. .. .. .. ..*Not printed.*

## CONTENTS OF VOLUME 28—*Continued.*


**243.** Return to an Order of the House of the 3rd February, 1916, for a copy of all letters, telegrams, or other communications sent to the Government or any member or department thereof before 15th August, 1914, pointing out the necessity of granting relief to the settlers in the drouth-stricken area of Alberta. Presented April 10, 1916.—*Mr. Buchanan*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*

**254.** Return to an Order of the House of the 21st February, 1916, for a copy of all letters, papers, telegrams and other documents relating to the survey in the harbour of Pictou, for a proposed new bridge, by the Railway Department; and also a statement showing the amounts paid in connection with said survey, the names of the persons to whom paid, and the purposes for which they were paid. Presented April 11, 1916.—*Mr. Macdonald*.. .. .. .

## CONTENTS OF VOLUME 28—*Continued.*


**265.** Return to an Order of the House of the 12th April, 1916, for a return showing:—1. How many clerks there are in the Finance Department who belong to and are paid from the outside service vote and who work in the inside service. 2. The names of said clerks. 3. Salary paid to each. 4. How long each has been in the service of the Department. 5. If all or any of these clerks have passed any examination. If so, what examination and on what date or dates. Presented April 26, 1916.—*Mr. Turriff*.. .. .. ..*Not printed.*

**266.** Return to an Order of the House of the 23rd February, 1916, for a return showing:—1. The number of permanent employees in the Department of Inland Revenue in 1915-16. 2. How many there will be in 1916-17. 3. How much money was paid in salaries for temporary employees in each of the following years: 1912-13, 1913-14, 1914-15 and 1915-16. 4. The names of the temporary employees and the dates of their appointment, respectively. Presented April 26, 1916.—*Mr. Lanctot*.. .. .. .. .. .. .. .. ..*Not printed.*

**267.** Return to an Order of the Senate dated the 14th instant, showing the number of men recruited up to the first day of April, 1916.—(*Senate*).. .. .. .. .. .. .. ..*Not printed.*

**268.** Return to an Order of the Senate, dated the 23rd day of March, 1916, of all papers and documents dealing with the escapes and the liberation of alien enemy prisoners from the detention camp situated at Banff, in the province of Alberta. Ordered, That the same do lie on the table.—(*Senate*).. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**269.** Return to an Order of the House of the 19th April, 1916, for a return showing:—1 Whether there is a Director of Recruiting and Organizations in England for the Canadian Service. 2. If so, his name and duties. 3. The number employed upon his staff. 4. The total expenses of his staff. Presented April 28, 1916... .. .. .. ..*Not printed.*

**270.** Return to an Order of the Senate, dated 11th instant:—For a copy of an application made by Rev. Isaac Hunter Macdonald, of Kintore, Ontario, to the Militia Department for a position of chaplain or major; also, of all copies of letters, papers or telegrams either recommending or opposing said application.—(*Senate*).. .. .. .. ..*Not printed.*

**271.** Return to an Address to His Royal Highness the Governor General of the 29th March, 1916, for a copy of all petitions received by the Governor General in Council requesting the disavowal of the Act of the Legislature of the Province of Ontario, Chapter 45, 5 George V, 1915, concerning the School Commission of the Roman Catholic Schools of the City of Ottawa, and of all documents, memoranda, reports, letters and correspondence concerning the said petitions for disavowal, or concerning the said Act of the Legislature of the Province of Ontario, 5 George V, Chapter 45. Presented May 1, 1916.—*Mr. Lapointe* (*Kamouraska*).. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

**271a.** Order in Council and Report of Minister of Justice transmitting to Lieutenant Governor of Ontario copy of petition from Samuel Genest and others, praying for the disallowance of an Act of the Legislature of Ontario, Chapter 45 of 5 George V (1915). Order in Council and Report of Minister of Justice on the Statutes of the Legislature of Ontario, passed in the 5th year of His Majesty's reign (1915). Report of Prime Minister of Ontario on petition relating to the disallowance of an Act of the Legislature of Ontario, Chapter 45 of 5 George V (1915). Presented May 3, 1916.—*Mr. Lapointe* (*Kamouraska*).. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Printed for sessional papers only.*

**272.** Return to an Order of the House of the 20th March, 1916, for a copy of all telegrams, letters, correspondence and contracts between the Quebec Harbour Commission and Benjamin Demers, of the parish of St. Nicolas, county of Lévis, concerning the purchase of the St. Nicolas quarry. Presented May 1, 1916.—*Mr. Bourassa*.. .. .. ..*Not printed.*

**273.** Return to an Order of the House of the 13th March, 1916, for a return showing a list of vessels belonging to the Canadian Government which are on service under the provision of the Canadian Naval Act, and of all vessels not now in service and their present condition and suitability for service, and also for a copy of all letters, petitions or communications had by or with the Government in regard to the establishment of a Canadian Naval Brigade. Presented May 1, 1916.—*Mr. Macdonald*.. .. ..*Not printed.*

**274.** Return to an Order of the House of the 29th March, 1916, for a copy of all correspondence, petitions and papers, including the report of Charles Bruce, engineer, in the possession of the Department of Marine and Fisheries relating to the construction of a bait freezer at White Head, Nova Scotia. Presented May 1, 1916.—*Mr. Sinclair*
*Not printed.*

**275.** Duplicate Return to an Order of the House of the 17th March, 1915, for a copy of all correspondence and reports relating to the purchase of 25,000 shovels of special pattern, mentioned in Order in Council P.C. 2302, dated 4th September, 1914, on page 38 of memoranda respecting work of the Department of Militia and Defence, and also relating to any further purchases of such shovels. Presented May 1, 1916.—*Mr. Hughes* (*P.E.I.*).. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..*Not printed.*

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**276.** Return to an Order of the House of the 5th April, 1916, for a copy of all letters, telegrams, offers, tenders, reports, contracts and documents relating to the sale or other disposal of small arms ammunition since 4th August, 1914. Presented May 1, 1916.—*Mr. Macdonald*.. .. .. .

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**284.** Return to an Order of the House of the 27th March, 1916, for a return showing the names and addresses of all persons in the Public Service of any and every Department of the Government of Canada, in the counties of Cape Breton, Victoria, Inverness, Richmond, Guysborough, Antigonish and Pictou, Province of Nova Scotia. Presented May 4, 1916. —*Mr. Carroll*.. .. .. .

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**295a.** Correspondence in respect to the offer of sale to the Government of Canada of the Quebec, Montmorency and Charlevoix Railway, the Quebec and Saguenay Railway and the Lotbinière and Megantic Railway. Presented by Hon. Mr. Reid, May 16, 1916.
*Not printed.*

**296.** Return to an Address to His Royal Highness the Governor General of the 1st March, 1916, for a copy of all correspondence, letters, telegrams, Orders in Council, etc., relating to the transfer by the Government of Ontario to the Government of Canada, of the rights held by the former in the lakes, dams, etc., contiguous to or forming a part of the Trent Valley Waterways System. Presented May 17, 1916.—*Mr. Graham.*
*Not printed.*

**297.** Return to an Order of the House of the 1st May, 1916, for a copy of all papers, telegrams, letters and other documents in connection with the decision to locate an interior storage elevator at Calgary, Alberta. Presented May 17, 1916.. .. .. .. .. .. .. ..*Not printed.*

**298.** Return to an Order of the House of the 12th April, 1916, for a return showing the plan and description of the proposed permanent harbour quay line in the harbour at Pictou, and for a copy of all papers, letters, telegrams and other documents relating to the establishment of the same. Presented May 17, 1916.—*Mr. Macdonald .. ..Not printed.*

**299.** Return to an Order of the House of the 21st February, 1916, for a copy of all tenders, offers, letters, telegrams and other documents relating to the arrangements for the handling of freight and coal at Pictou, in connection with the boats engaged in the winter service between Pictou and Prince Edward Island during the year 1914-1915, and during the present season. Presented May 18, 1916.—*Mr. Macdonald .. .. ..Not printed.*

St. Andrews Lock and Dam. Approaches to highway bridge, showing Strauss bascule lift.

# CANADA

## REPORT

OF THE

# MINISTER OF PUBLIC WORKS

ON THE

# WORKS UNDER HIS CONTROL

FOR THE

## FISCAL YEAR ENDED MARCH 31

## 1915

*Submitted in accordance with the Provisions of Chapter 39, Section 24, of the Revised Statutes of Canada.*

***PRINTED BY ORDER OF PARLIAMENT.***

OTTAWA
PRINTED BY J. DE L. TACHÉ,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1915

[No. 19—1916.]

*To Field Marshal, His Royal Highness Prince Arthur William Patrick Albert, Duke of Connaught and of Strathearn, K.G., K.T., K.P., etc., etc., etc., Governor General and Commander in Chief of the Dominion of Canada.*

I have the honour to lay before Your Royal Highness the Report of the Department of Public Works of Canada, for the fiscal year ended March 31, 1915.

I have the honour to be, sir,

Your Royal Highness's most obedient servant,

ROBERT ROGERS,

*Minister of Public Works.*

Ottawa, November 29, 1915.

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| Strathroy, Ont., " " | | 15-52 | 77 | | | | |
| Stuart River, B.C | | 38 | | 352 | | | |
| Sturgeon Bay, P.Q. | | 33 | | 217 | | | |
| " Falls, Ont. | | 36 | | 287 | | | |
| " River, Ont., bridges | | | | 544 | | | |
| " " Alta. | | 37 | | 319 | | | |
| " " Ont., channel | | | | 288 | | | |
| Sudbury, Ont., post office | | 15 | 77 | | | | |
| Sugar Island, Man. | | 37 | | | | | |
| Summerland, B.C | | 39 | | | | | |
| Summerside, P.E.I., public buildings | | 8-46 | 11 | | | | |
| Summertown, Ont | | 36 | | 288 | | | |
| Summerville, N.S | | 24 | | 70 | | | |
| Surf Inlet, B.C. | | 39 | | 350 | | | |
| Surrettes Island, N.S. | | 24 | | 71 | | | |
| Surveys and inspections | | 42 | | | | | |
| Sussex, N. B., public building | | 9-46 | 19 | | | | |
| Swan River, Man., immigration building | | 54 | | | | | |
| Swims Point, N S | | 24 | | 71 | | | |
| Swift Current, Sask., public building | | 17-55 | 93 | | | | |
| Sydney, N.S., public buildings | | 8-45 | 8 | | | | |
| " harbour | | 24 | | 71 | | | |
| Sydney Mines, N.S., public building | | 8-45 | | | | | |
| Syringa Creek, B.C | | 39 | | 350 | | | |
| **T** | | | | | | | |
| Tabusintac, N B | | 28 | | 139 | | | |
| Tachi river, B.C. | | 38 | | 352 | | | |
| Tadoussac, P.Q. | | 28-33 | | 217 | | | |
| Tamboline Slough, B.C. | | 38 | | 350 | | | |
| Tancook Island, N.S. | | 24 | | | | | |
| Tangiers, N.S | | 24 | | 72 | | | |
| Telephones | | | | | 18 | | |
| Telegraph and Nigger Island, Ont. | | 36 | | | | | |
| Telegraph lines, generally | 10 | 41 | | | 1 | | |
| " reports | | | | | 1 | | |
| " revenue | | | | | 17 | | |
| " staff | | | | | 5-19 | | |
| Terrence Bay, N.S. | | 24 | | 72 | | | |
| Terrebonne, P.Q., public building | | 11-50 | 32 | | | | |
| The Forks, Man. | | | | 304 | | | |
| The Range, N.B. | | 28 | | 139 | | | |
| Thessalon, Ont | | 36 | | 288 | | | |
| Thetford Mines, P.Q., public building | | 11-50 | | | | | |
| The Thrum, N.S | | 24 | | | | | |
| Thomas Creek, N.B | | 28 | | 139 | | | |
| Thompson River, B.C. | | 38-39 | | 351 | | | |
| Thorah Island, Ont | | 36 | | | | | |
| Thornbury, Ont | | 36 | | 289 | | | |
| Three Rivers, P.Q., public buildings | | 11-50 | 33 | | | | |
| " " harbour | | 33 | | | | | |
| Thurso, P. Q. | | 33 | | 218 | | | |
| Tidnish, N.S. | | 24 | | | | | |
| Tignish, P.E.I., public building | | 8-46 | 12 | | | | |
| Tignish, P.E.I. | | 25 | | 95 | | | |
| Tilbury, Ont., post office | | 15-52 | 78 | | | | |

| Names of Places, etc. | Part 1. Page | Part 2. Page | Part 3. Page | Part 4. Page | Part 5. Page | Part 6. Page | Part 7. Page |
|---|---|---|---|---|---|---|---|
| **T** | | | | | | | |
| Tilsonburg, Ont., post office | | 15–52 | 78 | | | | |
| Timiskaming telegraphs | | 42 | | | | | |
| " dam | | 42 | | | | | |
| Tobermory, Ont. | | 36 | | 289 | | | |
| Tobique Narrows, N.B. | | | | 125 | | | |
| " River, N.B. | | 27 | | 124 | | | |
| " Rock, N.B. | | | | 125 | | | |
| Tod Inlet, B.C. | | | | 3 1 | | | |
| Tofino B. C. | | 39 | | 351 | | | |
| Toronto, Ont., public buildings | | 15–52 | 78 | | | | |
| " harbour | | 36 | | 289 | | | |
| Total expenditure of department | 3 | 44 | | | | | |
| Tracadie, N.B. | | 28 | | | | | |
| " N.B., lazaretto | | 9–47 | 19 | | | | |
| " N.S. | | 24 | | | | | |
| " P.E.I. | | 25 | | 96 | | | |
| Transcona, Man., post office | | 54 | | | | | |
| Trent and Newcastle slides | | 41 | | | | 6 14 | |
| Trent Bridge, Ont | | 36 | | 293 | | | |
| Trenton, Ont | | 36 | | 294 | | | |
| " " public building | | 15–53 | 78 | | | | |
| Trois Pistoles, P.Q. | | 33 | | 218 | | | |
| " " post office | | 50 | | | | | |
| Trout Cove, N.S. | | 24 | | 73 | | | |
| Trout River, N.B. | | 27 | | 125 | | | |
| Truro, N.S., public buildings | | 8–45 | 8 | | | | |
| Turners Island, N.S. | | 24 | | 73 | | | |
| *Tyrian* S.S. cable ship | | 42 | | | 15-120 | | |
| **U** | | | | | | | |
| Ucluelet, B.C. | | 39 | | 351 | | | |
| Union Bay, B.C. | | 39 | | 351 | | | |
| " " " post office | | 19–58 | 105 | | | | |
| Unity, Sask., immigration building | | 55 | | | | | |
| Upper Derby, N.B. | | 28 | | 140 | | | |
| Upper Duncan River, B.C. | | 39 | | 351 | | | |
| Upper Fraser River, B.C. | | | | 352 | | | |
| Upper Ottawa storage dams | | 42 | | | | | |
| Upper Prospect, N.S. | | 24 | | 73 | | | |
| Upper Salmon River, N.B | | | | 140 | | | |
| Uxbridge, Ont., post office | | 15–53 | 82 | | | | |
| **V** | | | | | | | |
| Vails Point, Ont | | 36 | | 294 | | | |
| Valcartier, P.Q., post office | | 11 | | | | | |
| Valleyfield, P.Q. | | 33 | | | | | |
| Valleyfield, P.Q., public building | | 11–50 | | | | | |
| Vananda, B.C | | 39 | | 352 | | | |
| Vancouver, B.C., public buildings | | 19–58 | 105 | | | | |
| " " harbour | 6 | 39 | | 352 | | | |
| " " telegraphs | | 42 | | | 107 | | |
| Varennes, P.Q | | 33 | | 219 | | | |
| Vargas Island, B.C | | 40 | | 355 | | | |
| Vaudreuil, P.Q. | | 33 | | | | | |
| Vegreville, Alta, immigration building | | 58 | | | | | |
| Verchères, P.Q. | | 33 | | | | | |
| Verdun, P.Q | | 33 | | 219 | | | |
| " P.Q., post office | | 11 | | | | | |
| Vermilion, Alta, immigration building | | 18–58 | | | | | |
| Vernon, B.C., public building | | 20–59 | 108 | | | | |
| Vernon River, P.E.I | | 25 | | | | | |
| Vevey, B.C. | | 38 | | 355 | | | |
| Victoria, P.E.I | | 25 | | 96 | | | |
| Victoria Beach, N.S. | | 23 | | 60 | | | |
| Victoria Bridge, N.S. | | 24 | | 74 | | | |

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|---|---|---|---|---|---|---|---|
| **V** | | | | | | | |
| Victoria Beach Bay, Man. | | 37 | | 310 | | | |
| Victoria, B.C., public buildings | | 20-59 | 108 | | | | |
| " Harbour, B.C. | 6 | 40 | | 355 | | | |
| " " Ont. | | 36 | | 294 | | | |
| Victoriaville, P.Q., public building | | 11-50 | | | | | |
| Viking, Alta., immigration building | | 58 | | | | | |
| Ville Marie, P.Q. | | 33 | | 220 | | | |
| Virden, Man., post office | | 16-54 | 86 | | | | |
| Voglers Cove, N.S. | | 24 | | 74 | | | |
| **W** | | | | | | | |
| Wadena, Sask., buildings | | 55 | | | | | |
| Wainwright, Sask., immigration building | | 18-58 | | | | | |
| Walkerton, Ont., public building | | 15 | | | | | |
| Walkerville, Ont., public building | | 15-53 | 82 | | | | |
| Wallaceburg, Ont., post office | | 15 | | | | | |
| Walton, N.S. | | 24 | | 75 | | | |
| Warren Landing, Man. | | 37 | | 310 | | | |
| Waterloo, Ont., public building | | 15-53 | 83 | | | | |
| Waterville, P.Q., post office | | 11 | | | | | |
| Waterways Commission | | 43 | | | | | |
| Watford, Ont., post office | | 15 | | | | | |
| Websters, N.B. | | 28 | | 140 | | | |
| Welsh's Cove, N.B. | | 28 | | 141 | | | |
| Welchpool, N.B. | | 28 | | 141 | | | |
| Welland, Ont., public building | | 16-53 | 83 | | | | |
| Wellington, Ont. | | 36 | | 295 | | | |
| Wendover, Ont. | | 36 | | | | | |
| West Arichat, N.S. | | 24 | | 75 | | | |
| West Chezzetcook, N.S. | | 24 | | 76 | | | |
| West Dover, N.S. | | 24 | | | | | |
| Western Head, N.S. | | 24 | | | | | |
| Western Shore, N.S. | | 24 | | | | | |
| Westfield, N.B. | | 28 | | 141 | | | |
| West Head, N.S. | | 24 | | 77 | | | |
| West Lorne, Ont., post office | | 15 | | | | | |
| West Port Joli, N.S. | | | | 77 | | | |
| West Quaco, N.B. | | 28 | | 141 | | | |
| West River, P.E.I. | | 25 | | 97 | | | |
| Westville, N.S., public building | | 8-45 | 9 | | | | |
| Westwoods Harbour, N.S. | | 24 | | 77 | | | |
| Wetaskawin, Alta., public building | | 18-58 | 98 | | | | |
| Weyburn, Sask., post office | | 17-56 | 94 | | | | |
| Weymouth, N.S. | | 24 | | | | | |
| " post office | | 45 | | | | | |
| Whalens Shoal, Ont. | | | | 295 | | | |
| Whaletown, B.C. | | 40 | | 357 | | | |
| Wheat shipments | 6 | | | | | | |
| Wheatley, Ont. | | 36 | | 295 | | | |
| Whitby, Ont, harbour | | 36 | | 296 | | | |
| " public building | | 15-53 | 83 | | | | |
| Whitehead, N.S. | | 24 | | 78 | | | |
| White Point, N.S. | | 24 | | 78 | | | |
| White Rock, B.C., immigration office | | 59 | | | | | |
| " wharf | | 40 | | 358 | | | |
| Whites Bluff, N.B. | | | | 141 | | | |
| Whites Cove, N.B. | | 28 | | 142 | | | |
| Whitewater, N.S. | | 24 | | 78 | | | |
| Whonnock, B.C. | | 38 | | | | | |
| Whycocomagh, N.S. | | 24 | | 78 | | | |
| Wiarton, Ont., post office | | 15 | | | | | |
| Wiarton, Ont. | | 36 | | 296 | | | |
| Wilkie, Sask., public building | | 17-55 | 94 | | | | |
| Williams Head, B.C., quarantine station | | 20-40 | 110 | 358 | | | |
| " " telegraphs | | 42 | | | | | |
| Willow Cove, N.S. | | 24 | | 80 | | | |

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|---|---|---|---|---|---|---|---|
| **W** | | | | | | | |
| Willow Point, B.C. | | 40 | | 358 | | | |
| Wilson's Beach, N.B. | | 28 | | 142 | | | |
| Windsor, Ont., public buildings | | 15-53 | 83 | | | | |
| " " dock | | 36 | | 297 | | | |
| " N.S., public building | | 8-46 | 9 | | | | |
| " " harbour | | 24 | | 86 | | | |
| Wingham, Ont., public building | | 15-53 | 84 | | | | |
| Winnipeg, Man., bridges | | | | 545 | | | |
| " " public buildings | | 16-54 | 86 | | | | |
| " " harbour | | 37 | | 310 | | | |
| Winnipeg Beach, Man | | | | 312 | | | |
| Winnipegosis, Man | | 37 | | 312 | | | |
| Winnipeg River, Ont | | 36 | | 297-312 | | | |
| Wolfsons Bay, B.C. | | 40 | | | | | |
| Wolfville, N.S., public building | | 8-46 | 9 | | | | |
| " wharf | | 24 | | | | | |
| Woodbury Cove, N.B | | 28 | | 142 | | | |
| Wood Islands, P.E.I. | | 25 | | 97 | | | |
| Wood Mountain telegraphs | | 42 | | | | | |
| Woodstock, N.B., public building | | 9-47 | 19 | | | | |
| " Ont., " | | 15-53 | 84 | | | | |
| Woodwards Cove, N.B. | | 28 | | 142 | | | |
| **Y** | | | | | | | |
| Yamachiche, P.Q. | | 33 | | | | | |
| Yamaska River, P.Q., lock and dam | | 33 | | 530 | | | |
| Yarmouth, N.S. | | 24 | | 81 | | | |
| " public building | | 8-46 | | | | | |
| Yellow Point, B.C | | 40 | | 358 | | | |
| Yorkton, Sask., public buildings | | 17-56 | 94 | | | | |
| York bridge, Ont. | | 41 | | | | | |
| Youngs Cove, N.B. | | 28 | | 143 | | | |
| " N.S | | 24 | | 82 | | | |
| Yukon, public buildings | | 20 | | | | | |
| Yukon river, B.C. | | 40 | | | | | |
| " telegraphs | | | | | 15-107 | | |

# PART I

# REPORT

OF THE

# DEPUTY MINISTER OF PUBLIC WORKS

FOR THE YEAR ENDED MARCH 31

1915

# REPORT

OF THE

# DEPUTY MINISTER OF PUBLIC WORKS

FOR THE

## FISCAL YEAR ENDED MARCH 31, 1915.

Department of Public Works of Canada,
Ottawa, October 15, 1915.

Honourable Robert Rogers,
Minister of Public Works,
Ottawa, Ont.

Sir,—I have the honour to submit the report of the Department of Public Works of Canada, for the fiscal year ended March 31, 1915.

### EXPENDITURE.

The expenditure made by, or through, the department during the year 1914-15, on its several works of operation, maintenance and construction, amounted to the sum of $29,283,316.82, which has been classified under the following heads:—

| | |
|---|---|
| Harbour and river works | $10,529,346 30 |
| Dredging, plant, etc. | 5,120,610 56 |
| Slides and booms | 333,618 70 |
| Roads and bridges | 76,164 79 |
| Public buildings | 11,648,644 83 |
| Telegraphs | 1,003,590 13 |
| Miscellaneous | 571,341 51 |
| | $29,283,316 82 |

This exceeds the expenditure of the last fiscal year by the sum of $1,291,979.88. While the outlay in connection with dredging and public buildings has been nearly two million less, that on harbour and river works has been nearly three million more. The explanation of this is the large terminal works under contract in the various national harbours, the majority of which were well under way during the present year, and earning heavily. Many of these contracts extend over a period of several years, and the capital expenditure under this heading will therefore continue to be fairly large for some time.

The aggregate expenditure of the department, however, should next year show a marked decrease, as in September, 1914, shortly after the outbreak of the European war, it was decided to curtail in every way, reasonably possible, the expenditure on public works, in order that the resources of the country might be conserved to meet the exceptional and unprecedented demands of the war. The operations of the department were, for the most part, limited to the carrying on of works already under contract and in process of construction; and during the remaining seven months of the year this policy was rigidly adhered to. A continuation of the same policy during the next fiscal year, and the letting of new contracts for works only of the most urgent and pressing character, must result in a substantial reduction, which will be available for military purposes.

During the last decade, Canada has been the scene of prodigious development in railway building, in canal construction, in the erection of public buildings, and in the improvement of navigable channels and the provision of up-to-date terminal facilities in the more important harbours. The Department of Public Works has vastly extended its operations during this construction era, and large undertakings have been commenced and are being brought to successful completion. In the report for the year 1910-11 was included a statement of the departmental expenditures for a period of twenty years ending March 31, 1910, and it will be interesting to note the continued expansion of the work of the department since that date. For the succeeding five years, inclusive of the year under review, the figures are as follows:—

| | |
|---|---|
| 1910-11 | $11,807,035 42 |
| 1911-12 | 13,928,666 87 |
| 1912-13 | 18,844,223 96 |
| 1913-14 | 27,991,336 94 |
| 1914-15 | 29,283,316 82 |

REVENUE.

The revenue for the year, amounting to $486,435.94, was gathered from the following sources:—

| | |
|---|---|
| Slides and booms | $ 80,598 12 |
| Graving docks | 35,304 56 |
| Rents | 111,098 44 |
| Telegraphs | 225,512 29 |
| Casual revenue | 33,922 53 |
| | $486,435 94 |

There is a falling-off from last year's income of $56,021.17, chiefly accounted for by the decrease in graving dock and telegraph returns. The former is more a cause for congratulation than regret, inasmuch as it indicates fewer accidents to shipping in Canadian waters. An analysis of the dockages for the year 1914-15 bears this out and shows that the majority were for minor repairs only, costing less than $500 and consisting of painting, cleaning, change of wheels, etc. The diminution of the telegraph revenue, amounting to some $27,000, is no doubt due to economy practised in conducting business in a war year, which has been generally experienced by all public utilities.

HARBOUR AND RIVER WORKS.

The expenditure under this heading amounted to the sum of $10,529,346.30, an increase, as pointed out above, of nearly three million dollars, or, to be exact, $2,883,210.93. Of this sum, $1,231,032.56 was expended on repairs to, and maintenance of, existing works.

The following works, given by provinces, were completed during the year:—

*Nova Scotia.*—Wharves at Beaver Harbour, Hantsport (new), Indian Point, Lower Burlington, Maitland Ferry, Mira Ferry, Salmon River (C.B. County); Spry Bay; and at Windsor a wharf was purchased. Breakwaters at Blandford, Caldwell's Cove, Comeau Cove, Devil's Island (new), East Ferry, East Green Harbour, Long Cove, Seaforth, Trout Cove, and Young's Cove.

*Prince Edward Island.*—Wharves at McArthur's Landing, McAuley, North River Bridge, Port Hill, Tignish; and at Alberton, a wharf was purchased from the local Government.

*New Brunswick.*—Wharves at Cocagne, Hatfield Point, Heustis Landing, Little Black River, Shediac Island, Chamberlain Road, Stonehaven, Tabusintac, White's Bluff, and Woodbury's Cove. At Chocolate Cove, a wharf was transferred to this department by the local Government. Breakwaters at Little Dipper Harbour, Martin's Head, Portage River, Welches Cove, Woodwards Cove; and a new Breakwater was built at Seal Cove.

*Quebec.*—Wharves at Batiscan, Bebril, Cacouna East, Grosse Isle (Gaspé), Honfleur, Lake Kenogamishish (two), Nicolet, Notre Dame de la Salette, Notre Dame des Sept Douleurs, Notre Dame du Lac (new), Quyon, Thurso; and a wharf was purchased at Ste. Anne de Beaupré. Breakwater at Roberval.

*Ontario.*—Wharves at Armitage Landing, Burnt Island, Caesarea, Craigie Lea, Doe Lake, Fitzroy Harbour, Parry Sound (new), Port Perry, Port Sydney, Pumpkin Point, Vails Point, Victoria Harbour; and a wharf was purchased at Kagawong. A new breakwater was built at Kincardine.

*Manitoba.*—A wharf was built at Ninette.

*British Columbia.*—Wharves at Ainsworth, Bindlays Landing, Blind Bay, Crawford (transferred to this department by the Provincial Government), East Robson, Farringtons, Frasers, Fulford Harbour, Ganges Harbour, Gleneden, Grace Harbour, Granite Bay, Halls Landing, Harris Road, Heriot Bay, Jackson Bay, Johnsons Landing, Lund, Magars Landing, Marshs Landing, Nakusp, Needles, Nootka Island, Upper Pitt Lake, Lower Pitt River, Pritchard, Roberts Creek, Roy, Saanichton, Safety Cove, Scarf, Sonitella, Steamboat Bay, Vargas Island, Vevey, Whaletown, and Yellow Point. New wharves were built at Kaslo and Van Anda.

The smaller contracts which were awarded previous to the outbreak of the war were for the most part finished by the end of the fiscal year.

The larger works in the national harbours have steadily progressed during the year, and a number of them are still several years from completion. The following table showing the amount earned up to March 31, 1915, against the probable amount of the contract, will indicate the progress which has been made:—

| Work. | Name of Contractors. | Estimated Cost at Schedule Prices. | Earned to March 31, 1915. |
|---|---|---|---|
| | | $ cts. | $ cts. |
| St. John, N. B., Courtenay Bay Improvements, consisting of the construction of a breakwater, wharves, and the dredging of an entrance channel and basin. | Norton Griffiths Company, Limited. | 7,500,000 00 | 2,328,000 00 |
| Lauzon, Que., construction of a first-class graving dock. | M. P. & J. T. Davis..... | 2,721,000 00 | 311,000 00 |
| St. Charles River, Que., construction of a lock and dam. | Quinlan & Robertson ... | 1,873,000 00 | 216,000 00 |
| Toronto Harbour Improvements, consisting of the construction of a breakwater from the new western entrance to the Humber river; a revetment wall from the eastern entrance to the Woodbine, and the dredging of a channel and basin with wharfage facilities in Ashbridges bay. | Canadian Stewart Co., Limited. | 5,371,000 00 | 815,000 00 |
| Vancouver, B.C., construction of a wharf.. . | Messrs. Henry McFee & McDonald. | 1,786,000 00 | 1,070,000 00 |
| Victoria, B.C., contruction of a breakwater at Ogden point. | Sir John Jackson (Canada) Limited. | 1,797,000 00 | 1,063,000 00 |
| Victoria, B.C., construction of two wharves inside the breakwater. | Messrs. Grant, Smith & McDonnell. | 2,244,000 00 | 380,000 00 |

From the above, it will be seen that in all probability the new wharf at Vancouver, B.C., and the breakwater at Victoria, B.C., will be completed during the ensuing fiscal year. It may be mentioned in connection with the former work that the Board of Grain Commissioners of Canada has erected its Pacific Coast terminal elevator at the inner end of the Vancouver wharf site, and splendid trackage facilities have been arranged to serve the business of both the elevator and the wharf.

Reference was made last year to the immense shipments of grain from the lake ports of Port Arthur and Fort William, where the department has, for a number of years, been carrying on extensive harbour improvements. The record quantity of 205,000,000 bushels were shipped last year from these ports. This year, there has been a tremendous falling-off, the total quantity shipped during the navigation season of 1914 being only 128,379,363 bushels. The chief explanation of this is undoubtedly to be found in the difference in the crops of these two years. Grain Statistics, 1915, pp. 369-370, gives the total crop of Manitoba, Saskatchewan, and Alberta as 500,685,500 bushels for 1913, and 318,941,900 bushels for 1914, a decrease of 181,743,600 bushels. On the other hand, grain shipments from Montreal increased from 46,372,283 bushels, of which 6,742,268 bushels were American grain, to 74,521,532 bushels, of which 36,861,917 bushels were American grain. The vastly increased volume of American grain passing through the port of Montreal is accounted for by the immense orders

placed by European countries in America for shipment in the months of July and August, 1914. The quantity was so large that it could not be handled by the ordinary liner tonnage of the North Atlantic, and the resulting increase in rates attracted an unusual number of tramp steamers to Montreal. The total American crop of wheat in 1914 was exceptionally large, providing a surplus for export as wheat and flour during the crop year of well over 300,000,000 bushels. On the other hand, the Canadian crop, as pointed out above, was decidedly short. With the Russian supply cut off through the closing of the Dardanelles, and the Australian crop a failure, Europe depended during that crop year chiefly on the United States, and the United States exports went out from Canadian ports as well as from American ports in greatly increased volume. The registered tonnage of shipping sailing from the port of Montreal for Europe in 1914 was about the same as in 1913, but the requisitioning of about 50 per cent of the liners and their substitution by tramp vessels provided a considerably larger cargo capacity, and there was, moreover, a decline in other classes of freight, so that Montreal was able to handle a very much larger quantity of grain and, for the reason above stated, the increase was in the American grain, which came chiefly by vessel from Chicago and Duluth.

Similarly to Port Arthur and Fort William, there was also a falling-off in the grain shipments from the port of St. John, N.B., during the winter season from November 1, 1914, to March 31, 1915, but for altogether different reasons. While, in the case of Port Arthur and Fort William, there were plenty of lake vessels available during the navigation season of 1914, there was less grain to ship on account of the crop shortage that year. In the case of St. John, N.B., there was plenty of grain, but the amount exported depended on the space available in the liners which visited that port during the winter; and, as has been stated, a very large percentage of these were commandeered for war service, and were not available for ordinary purposes.

## PUBLIC BUILDINGS.

The expenditure in this branch of the department amounted to $11,648,644.83, a decrease of about three-quarters of a million from that of the preceding year. One hundred and one public buildings were under contract during the fiscal year, and the following were completed:—

*Nova Scotia.*—Amherst drill hall.

*New Brunswick.*—Hampton public building.

*Quebec.*—Public buildings at Louiseville, St. Gabriel de Brandon, St. Laurent, and Ste. Thérèse, and postal stations "F," "H," "L," at Montreal; a detention hospital at Montreal; an armoury at Lévis, and a new immigration building at Quebec.

*Ontario.*—Public buildings at Acton, Aylmer, Bracebridge, Eganville, Collingwood, Grimsby, Lakefield, Midland, Shelburne, and Steelton; additions were made to public buildings at Ingersoll and Oshawa; a drill hall erected at Port Arthur, and a dormitory at Kingston.

*Manitoba.*—Public buildings at Carman, Stonewall, and Virden; a drill-hall and an armoury at Winnipeg.

*Saskatchewan.*—A new public building at Moosejaw, and a drill hall at Prince Albert.

*British Columbia.*—Public buildings at Duncan, Greenwood, and Port Alberni, and an immigration shed at Prince Rupert.

The following buildings were still under construction at the close of the fiscal year:—

*Nova Scotia.*—New public building at Dartmouth.

*New Brunswick.*—Public building at Milltown, new public building at Fredericton, and a new post office at St. John.

*Quebec.*—Public buildings at East Angus, Jonquières, Matane, Murray Bay, Shawville, Ste. Agathe and Three Rivers; an addition to the post office at Quebec; an immigration building at Quebec; a drill hall at Coaticook, and a new examining warehouse at Montreal.

*Ontario.*—Public buildings at Aurora, Burford, Eganville, Elmira, Hanover, Listowel, Milton, Milverton, Norwich, Newmarket, Palmerston, Preston, Sudbury, Walkerville, and a new building at Brantford; drill halls at Barrie, Galt, Napanee, and Pembroke, examining warehouses at Fort William and Port Arthur; a custom-house at Ottawa, and postal station "G" at Toronto.

*Alberta.*—An examining warehouse at Calgary, and a drill hall at Edmonton.

*British Columbia.*—A detention hospital at Vancouver.

DREDGING.

This branch of the department has expended less than in the two previous years. The total outlay amounted to $5,120,610.56. Of this sum, $208,686.40 were expended on new plant, $3,157,994.55 on contract dredging, and $1,753,929.61 on the operation and repair of the departmental fleet. The cost of operating the fleet of tugs and dredges owned by the department has been practically the same, the reduction in expenditure of over one million dollars from last year having occurred under the headings of new plant and contract dredging. The works chargeable to new dredging plant, commenced in 1914-15, were comparatively small, and the expenditure slight for the completion of plant contracted for last year, while the curtailment of contract dredging, owing to the outbreak of war, amounted to over $700,000. Where contracts had been let early in the year they were proceeded with, but otherwise only improvements of the most pressing necessity, in the interests of navigation have received attention.

Dredging operations were carried on at the following places, where an expenditure of $10,000 or over was made:—

*Nova Scotia.*—Digby, East River, Liverpool, Lockeport, Lunenburg, and Margaree.

*Prince Edward Island.*—Belle River, Charlottetown, Murray Harbour, and Rustico.

*New Brunswick.*—Bathurst, Buctouche Beach, Campbellton, Chocolate Cove, Grimross Canal, and St. John Harbour.

*Quebec.*—Amherst, Rivière du Loup, en bas, Ste. Anne de Bellevue, Saguenay river, Verdun, and Longueuil.

*Ontario.*—Fort William, Goat Island, Goderich, Hamilton, Kingston, Picnic Island, Port Arthur, Port Burwell, Rainy River, Sault Ste. Marie, Telegraph and Nigger Islands, Trenton and Wellington.

*Manitoba.*—Selkirk and Winnipegosis.

*British Columbia.*—Columbia River, Fraser River, Nanaimo, Okanagan Lake, Pitt River, Powell River, Skeena River, Vancouver, False Creek, and Victoria.

It is a matter of congratulation, in reviewing the improvements which have been made from time to time in the departmental dredging plant, to note the results which have been secured from the Lobnitz rockbreaker, which was purchased a couple of years ago for the Maritime Provinces. The department had no rock-drilling plant of its own in Eastern Canada, and that belonging to contractors was for the most part confined to the provinces of Ontario and Quebec. For some years the department had been urged to remove rock shoals which obstructed the entrance to several harbours in the Maritime Provinces; and while opportunity was afforded private parties to undertake such work, it was found that practically no plant was available for its performance, contractors' plant being limited to dredges only, and those mostly of the dipper type. With the object of overcoming this difficulty, the department secured and put in operation a Lobnitz rockbreaker. It has been in use in Buctouche, N.B., Lunenburg, N.S., and Halifax, N.S., harbours, and has proved a great success. Rock which if contracted for and removed in the ordinary way by drilling and blasting would have cost the department from $4 upwards per cubic yard, has been satisfactorily removed at an average cost of $1.50 per cubic yard. The rockbreaker naturally works most efficiently in stratified rock, such as sandstone, and lying fairly flat.

During the year 1913-14, the department constructed two dredges of an improved type, embodying several advanced ideas in dredge construction, designed by Mr. A. W. Robinson, C.E., of Montreal, Que. These dredges were put into commission in 1914: dredge *P.W.D.-123* at Ste. Anne de Bellevue, and dredge *P.W.D.-13* at Buctouche, N.B. At the former place dredge *No. 123* was employed in dredging a channel 250 feet wide to provide a better approach to the lower entrance to the lock. The formation is Potsdam sandstone in layers about 8 inches deep with some mud overlying. The dredge removed this for $1.44 per cubic yard, place measurement. The estimated cost, if done by contract, was from $3.50 to $4 per cubic yard, place measurement. The work is slow, but the results are gratifying. At Buctouche, N.B., dredge *No. 13* removed the rock broken by the Lobnitz rockbreaker. This work has been also very satisfactory; and during the season of 1915 the dredge removed the last of the rocky shoal without the need of having it broken by the rockbreaker.

Mention was made in the report for 1912-13 of another innovation in connection with the departmental dredges, namely, the installation of apparatus for burning oil fuel in place of coal. It was estimated at that time that its introducion would result in cutting down the outlay for fuel by a sum of $25,000 annually. The results have proved even more satisfactory than anticipated. The change was made on the British

Columbia fleet, and sufficient time has now elapsed to enable the preparation of a statement showing the saving in cost of fuel thereby effected. The figures which follow are for a period of one year:—

| Name of Plant. | Cost of Coal. | Cost of Oil. | Saving. |
|---|---|---|---|
| | $ | $ | $ |
| Dredge *Mastodon* | 13,124 | 6,813 | 6,311 |
| " *Fruhling* | 22,763 | 13,861 | 8,902 |
| " *King Edward* | 19,211 | 10,725 | 8,486 |
| " *Ajax* | 10,506 | 6,903 | 3,603 |
| Lobnitz Rockbreaker *No. 1* | 5,988 | 4,223 | 1,765 |
| Tug *Point Grey* | 7,585 | 4,197 | 3,388 |
| " *Point Ellice* | 7,510 | 4,194 | 3,316 |
| " *Petrel* | 3,305 | 1,912 | 1,393 |
| | 89,992 | 52,828 | 37,164 |

It may be pointed out also that the saving relates not only to the cost of fuel alone, but a very considerable additional saving is effected. Inasmuch as the fuel oil allows steam to be raised much more quickly, the cost of firing and the cost of handling the fuel are much decreased, and there is less wear and tear on the vessels.

TELEGRAPHS.

The most noteworthy work carried out by this branch of the department during the fiscal year was the improvement in the means of telegraphic communication between Prince Edward Island and the mainland, and the provision made for long-distance communication by telephone. The telegraph service on the island is operated, under subsidy from the Dominion Government, by the Anglo-American Telegraph Company—now controlled by the Western Union Telegraph Company—and on a break occurring in the company's single cable, telegraph communication with the island was entirely cut off. Permanent connection has now been practically assured by the laying, on the 4th July, 1914, of 8·82 knots of four-conductor cable between Cape Traverse and Cape Tormentine. Two of these conductors contain a telephone circuit for the operation of the new Prince Edward Island car ferry service; the other two conductors being available for telegraph purposes.

The laying of 12·5 knots of two-conductor cable on the 20th June, 1914, between Wood island, Prince Edward Island, and Point Caribou, Nova Scotia, enabled the Prince Edward Island Telephone Company to connect with the lines of the Maritime Telegraph and Telephone Company, and long-distance telephone communication was afforded residents of Prince Edward Island, from Summerside to North Sydney, Cape Breton, and, of course, over shorter distances to Halifax, etc. This has proved a great boon to the islanders by facilitating the marketing of produce and the transaction of general business. The long-distance telephone service from Halifax, N.S., to Charlottetown, Prince Edward Island, across the straits of Northumberland, was formally opened by the Right Honourable the Prime Minister, Sir Robert Borden, on the 6th July, 1914.

The messages transmitted over Government lines during the year numbered 377,849; and there are now 11,497 miles of Government telegraph lines, with 870 offices.

In conclusion, I beg to thank the staff for their valuable assistance in carrying on the work of the department throughout the year.

I have the honour to be, sir,

Your obedient servant,

J. B. HUNTER,

*Deputy Minister.*

# PART II

# REPORT OF THE CHIEF ACCOUNTANT

FOR THE

FISCAL YEAR ENDED MARCH 31

# 1915

DEPARTMENT OF PUBLIC WORKS, CANADA,
CHIEF ACCOUNTANT'S OFFICE,
OTTAWA, October 13, 1915.

R. C. DESROCHERS, Esq.,
Secretary, Department of Public Works,
Ottawa.

SIR,—I beg to submit the report upon the expenditure made by this department during the fiscal year ended March 31, 1915.

As in the previous years, the report takes the form of three tabular statements, as follows:—

STATEMENT A, showing the expenditures upon each work under the several heads of (1) construction and improvements, (2) repairs, (3) staff and maintenance. In treating of public buildings, as it would be cumbersome to give the cost of maintenance in detail in this statement, that expenditure is condensed into one item, for each province, the fuller detail being reserved for Statement B.

STATEMENT B, showing separately, for each building, the cost of rent, salaries, heating, lighting, and water.

STATEMENT C, showing amounts advanced by Government for the construction of certain works of a semi-public character, under statutory authority, and after inspection by officers of this department. There were no transactions of this nature during 1914-15, and the statement is only inserted to preserve the continuity of the report from year to year.

The total expenditure during the fiscal year was $29,283,316.82, an increase of $1,291,979.88 over the expenditure of the preceding year.

The volume of work passed through the Accountant's Branch during 1914-15 may be briefly indicated as follows:—

| —— | Number of cheques issued. | Amount. |
|---|---|---|
| | | $ cts. |
| Direct payment by departmental cheque— | | |
| Issued by head office, Ottawa | 82,302 | 7,432,349 29 |
| Issued by agencies | 44,003 | 2,580,859 13 |
| Total departmental cheques | 126,305 | 10,013,208 42 |
| Payment by Receiver General's cheque, after applications issued by this office, upon the Auditor General (contract, work, etc.) | 2,113 | 19,270,108 40 |
| Total expenditure | | 29,283,316 82 |

I have the honour to be, sir,
Your obedient servant,

A. G. KINGSTON,
*Chief Accountant and Comptroller.*

# STATEMENT OF EXPENDITURE

DURING

## FISCAL YEAR ENDED MARCH 31, 1915

STATEMENT A, showing the Amounts Expended by the Department of Public Works of Canada during the fiscal year ended March 31, 1915.

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia.* | | | | |
| Amherst drill hall | 68,248 60 | | | 68,248 60 |
| " post office (new) | 10,904 60 | | | 10,904 60 |
| " post office (old) | | 862 16 | | 862 16 |
| Annapolis post office, etc | | 262 63 | | 262 63 |
| Antigonish post office, etc | | 1,418 69 | | 1,418 69 |
| Arichat post office, etc | | 693 19 | | 693 19 |
| Baddeck post office, etc | | 260 07 | | 260 07 |
| Bridgewater post office, etc | | 617 08 | | 617 08 |
| Canning post office, etc | 112 05 | | | 112 05 |
| Canso post office, etc | | 1,446 73 | | 1,446 73 |
| Chester post office, etc | 120 97 | | | 120 97 |
| Dartmouth public building (new) | 28,901 99 | | | 28,901 99 |
| " post office (old) | | 106 40 | | 106 40 |
| Digby post office, etc | | 869 15 | | 869 15 |
| Glace Bay post office, etc | | 1,857 17 | | 1,857 17 |
| Guysborough post office, etc | | 832 19 | | 832 19 |
| Halifax archives office | | 13 51 | | 13 51 |
| Halifax Asst. Receiver Gen. office | | 4 00 | | 4 00 |
| " citadel, new quarters for single men and recreation establishment | 2,000 00 | | | 2,000 00 |
| " customs examining warehouse | 8,800 00 | 35 57 | | 8,835 57 |
| " custom house and inland revenue | 7,551 43 | 2,203 11 | | 9,754 54 |
| " custom house and inland revenue, power for machinery | | | 210 54 | 210 54 |
| " immigration bldg | | 799 00 | | 799 00 |
| " inland revenue (McCurdy Building) | 2,354 96 | | | 2,354 96 |
| " militia and defence (Dennis building) | 1,380 85 | 9 97 | | 1,390 82 |
| " postal station at north end | 8,441 55 | | | 8,441 55 |
| " post office | 5,940 04 | 3,025 33 | | 8,965 37 |
| " post office power for machinery | | | 576 86 | 576 86 |
| " quarantine station, new buildings and improvements | 1,550 00 | 2 10 | | 1,552 10 |
| " S.S. Inspector's office (Dockyard) | | 104 84 | | 104 84 |
| Hantsport post office, etc | 121 12 | | | 121 12 |
| Kentville experimental farm | 4,870 55 | | | 4,870 55 |
| " post office, etc | | 743 91 | | 743 91 |
| Liverpool post office, etc | | 553 10 | | 553 10 |
| Lockport custom house | | 327 31 | | 327 31 |
| Lunenburg post office, etc | | 153 56 | | 153 56 |
| Middleton custom house | | 48 19 | | 48 19 |
| " post office, etc | 8 82 | | | 8 82 |
| Nappan experimental farm | 5,985 59 | | | 5,985 59 |
| New Glasgow post office, etc | 1,262 67 | 349 46 | | 1,612 13 |
| North Sydney quarantine station | | 112 75 | | 112 75 |
| " immigration building | | 476 55 | | 476 55 |
| " post office, etc | | 1,159 58 | | 1,159 58 |
| Oxford Junction (railway trucks) | 57 00 | | | 57 00 |
| Parrsboro post office, etc | 1,055 11 | 469 68 | | 1,524 79 |
| " " power for machinery | | | 20 00 | 20 00 |
| Pictou custom house | 300 00 | 304 08 | | 604 08 |
| " post office | 900 00 | 180 84 | | 1,088 84 |
| Shelburne post office | 2,900 00 | 23 84 | | 2,923 84 |
| Springhill post office, etc | | 3,573 61 | | 3,573 61 |
| Stellarton post office, etc | | 45 22 | | 45 22 |
| Stewiacke post office, etc | 1,526 55 | | | 1,526 55 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia*—Concluded. | | | | |
| Sydney inspector of fisheries—Whitney pier | | 13 65 | | 13 65 |
| " post office, etc | | 995 15 | | 995 15 |
| " Mines post office, etc | | 145 76 | | 145 76 |
| Truro post office, etc | | 881 15 | | 881 15 |
| " new public building | 17,000 00 | | | 17,000 00 |
| Westville post office, etc | | 309 33 | | 309 33 |
| Windsor immigration building | | 26 50 | | 26 50 |
| " post office, etc | 2,363 63 | | | 2,363 63 |
| Wolfville post office, etc | 2,506 68 | 105 84 | | 2,612 52 |
| Yarmouth post office, etc | | 385 19 | | 385 19 |
| Heating, lighting, water, etc. for all buildings in Nova Scotia (for details see page— 46) | | | 67,375 60 | 67,375 60 |
| Totals, Nova Scotia | 187,164 76 | 26,807 14 | 68,183 00 | 282,154 90 |
| *Prince Edward Island.* | | | | |
| Charlottetown customs examining warehouse (Bank of Commerce building) | | 217 15 | | 217 15 |
| " experimental farm | | 46 55 | | 46 55 |
| " Marine and Fisheries building | | 471 68 | | 471 68 |
| " post office, etc | 2,421 56 | 445 69 | | 2,867 25 |
| Georgetown post office, etc | | 364 32 | | 364 32 |
| Kensington railway station, repairs to truck | | 1 00 | | 1 00 |
| Montague post office, etc | | 362 18 | | 362 18 |
| Souris post office, etc | | 827 39 | | 827 39 |
| Summerside post office, etc | 22,554 11 | 29 03 | | 22,582 14 |
| Tignish post office, etc | 2,322 12 | 141 50 | | 2,463 62 |
| Heating, lighting, water, etc. For all buildings in Prince Edward Island (for details see page 46) | | | 12,316 85 | 12,316 85 |
| Totals, Prince Edward Island | 27,297 79 | 2,906 49 | 12,316 85 | 42,521 13 |
| *New Brunswick.* | | | | |
| Bathurst post office, etc | | 475 25 | | 475 25 |
| Buctouche post office, etc | 153 70 | | | 153 70 |
| Campbellton post office, etc | | 1,264 35 | | 1,264 35 |
| Campobello fisheries office | | 45 00 | | 45 00 |
| Chatham post office, etc. (addition) | 598 00 | 113 56 | | 711 56 |
| Chatham quarantine station | | 179 80 | | 179 80 |
| Dalhousie post office, etc | | 800 55 | | 800 55 |
| Fairville post office, etc | | 86 25 | | 86 25 |
| Fairville post office, etc., power for machinery | | | 46 00 | 46 00 |
| Fredericton district engineer's office | | 15 00 | | 15 00 |
| Fredericton experimental farm | 10,757 56 | | | 10,757 56 |
| Fredericton public building (new) | 62,306 32 | | | 62,306 32 |
| Fredericton post office, etc. (old) | | 340 58 | | 340 58 |
| Grand Falls post office, etc | | 53 40 | | 53 40 |
| Hampton (Ossekeag) post office, etc | 15,093 56 | 18 09 | | 15,111 65 |
| Hampton (Ossekeag) sub-post office | 200 00 | | | 200 00 |
| Harcourt—I.C.R. station (truck repairs) | | 3 00 | | 3 00 |
| Hartland—public building | | 257 46 | | 257 46 |
| Hillsborough post office, etc | | 679 64 | | 679 64 |
| Marysville post office, etc | | 1,137 87 | | 1,137 87 |
| Milltown post office, etc | 20,104 06 | | | 20,104 06 |
| Moncton post office, etc | | 729 78 | | 729 78 |
| Newcastle post office, etc | | 354 80 | | 354 80 |
| Ossekeag (see Hampton) | | | | |
| Richibucto post office, etc | | 378 77 | | 378 77 |
| St. George post office, etc | 1,848 77 | | | 1,848 77 |
| St. John custom house | 5,215 66 | 1,582 64 | | 6,798 30 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintennnce. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts | $ cts. |
| *New Brunswick*—Continued. | | | | |
| St. John district engineer's office | | 205 80 | | 205 80 |
| St. John drill hall | 4,982 42 | | | 4,982 42 |
| St. John immigration building | | 556 44 | | 556 44 |
| St. John marine agency (Bank of Commerce building) | | 233 15 | | 233 15 |
| St. John, Partridge Island quarantine station | 40,146 10 | | | 40,146 10 |
| St. John, Partridge Island, renewal of water system | 3,604 92 | | | 3,604 92 |
| St. John post office (new) | 180,992 42 | | | 180,992 42 |
| St. John post office (old) | 1,973 36 | 217 28 | 3 01 | 2,193 65 |
| St. John savings bank | 194 92 | 573 09 | | 768 01 |
| St. John West, immigration building | | 11 50 | | 11 50 |
| St. John West, post office (Carleton) | | 386 18 | | 386 18 |
| St. Stephen post office, etc | | 247 45 | | 247 45 |
| Sackville post office, etc | | 3 00 | | 3 00 |
| Shediac post office, etc | | 25 60 | | 25 60 |
| Sussex post office, etc | 1,977 99 | 72 23 | | 2,050 22 |
| Tracadie lazaretto | 1,156 67 | 102 50 | | 1,259 17 |
| Woodstock post office, etc | | 944 25 | | 944 25 |
| Heating, lighting, water, etc., for all buildings in New Brunswick (for details see page 47) | | | 54,013 42 | 54,013 42 |
| Totals, New Brunswick | 351,306 43 | 12,094 26 | 54,062 43 | 417,463 12 |
| *Quebec.* | | | | |
| Acton Vale post office, etc | | 168 46 | | 168 46 |
| Arthabaskaville post office, etc | | 1,133 03 | | 1,133 03 |
| Aylmer post office, etc | | 305 72 | | 305 72 |
| Beauharnois post office, etc | | 168 60 | | 168 60 |
| Beauport post office, etc | 223 39 | | | 223 39 |
| Berthierville post office, etc | | 125 60 | | 125 60 |
| Buckingham post office, etc | | 94 25 | | 94 25 |
| Cap Rouge experimental farm | 9,068 88 | | | 9,068 88 |
| Chicoutimi post office, etc | | 110 49 | | 110 49 |
| Coaticook armoury | 19,828 29 | | | 19,828 29 |
| Coaticook post office, etc | 4,764 02 | 151 09 | | 4,915 11 |
| Comin's Mills custom house (Compton) | 54 22 | | | 54 22 |
| Cookshire post office, etc | | 33 57 | | 33 57 |
| Compton post office, etc | | 85 67 | | 85 67 |
| Drummondville post office, etc | | 859 05 | | 859 05 |
| Dundee custom-house | | 203 43 | | 203 43 |
| East Angus post office, etc | 20,108 03 | | | 20,108 03 |
| Farnham experimental farm | 8,046 05 | | | 8,046 05 |
| Farnham post office, etc | | 162 16 | | 162 16 |
| Fraserville post office, etc | | 92 41 | | 92 41 |
| Garneau Junction (trucks) | 65 47 | | | 65 47 |
| Granby public building | | 1,070 38 | | 1,070 38 |
| Grand Mere public building | 1,403 33 | | | 1,403 33 |
| Grosse Isle quarantine station, improvements | 24,142 49 | | | 24,142 49 |
| Grosse Isle quarantine station, new buildings | 85,318 41 | | | 85,318 41 |
| Hochelnga post office, etc | 2,983 65 | 87 49 | | 3,071 14 |
| Hull post office | | 39 00 | | 39 00 |
| Iberville post office | | 123 52 | | 123 52 |
| Joliette armoury | 67 70 | | | 67 70 |
| Joliette custom-house (temporary) | | 215 41 | | 215 41 |
| Joliette post office, etc | 16,788 13 | 409 51 | | 17,197 64 |
| Joliette excise office | | 208 32 | | 208 32 |
| Jonquieres post office, etc | 16,230 58 | | | 16,230 58 |
| Knowlton post office and armoury | | 812 69 | | 812 69 |
| Lachine post office, etc | 9,190 89 | 0 65 | | 9,191 54 |
| Lachute post office, etc | | 443 40 | | 443 40 |
| Laprairie post office, etc | 2,303 84 | | | 2,303 84 |
| L'Assomption post office, etc | | 464 20 | | 464 20 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec—Continued.* | | | | |
| Lauzon dry-dock engineer's office | | 514 97 | | 514 97 |
| Levis armoury and gun shed | 16,397 04 | | | 16,397 04 |
| Levis post office, etc | 64 00 | 73 62 | | 137 62 |
| Longueuil post office, etc | | 128 80 | | 128 80 |
| Louiseville post office, etc | 10,048 17 | 2 70 | | 10,050 87 |
| Magog post office, etc | | 743 14 | | 743 14 |
| Marieville post office, etc | | 730 84 | | 730 84 |
| Matane post office, etc | 16,834 24 | 11 00 | | 16,845 24 |
| Megantic post office, etc | | 749 24 | | 749 24 |
| Metapedia railway station (trucks) | | 2 86 | | 2 86 |
| Montjoli railway station (trucks) | | 12 65 | | 12 65 |
| Montmagny post office, etc | | 851 13 | | 851 13 |
| Montreal alien registration office | | 429 90 | | 429 90 |
| " archives office | 934 95 | | | 934 95 |
| " Bonaventure station, mail room | 602 40 | 8 10 | | 610 50 |
| " civil service examination office | | 36 00 | | 36 00 |
| " customs express building (old) | | 1,231 57 | | 1,231 57 |
| " custom-house | 7,871 30 | 748 22 | | 8,619 52 |
| " district engineer's office (Shaughnessy building) | | 556 00 | | 556 00 |
| " examining warehouse (new) | 854,797 08 | | | 854,797 08 |
| " examining warehouse (old) | 1,865 85 | 183 05 | | 2,048 90 |
| " examining warehouse, power for machinery | | | 542 63 | 542 63 |
| " forestry products laboratory (University street) | 4,980 00 | | | 4,980 00 |
| " immigration building | | 527 07 | 13 67 | 540 74 |
| " inland revenue building (new) | 2,700 00 | | | 2,700 00 |
| " inland revenue building, present | | 324 94 | | 324 94 |
| " Marine and Fisheries agency (Shaughnessy building) | | 248 62 | | 248 62 |
| " new detention hospital | 23,155 85 | | 136 60 | 23,292 45 |
| " Place Viger railway station, mail room | 300 00 | | | 300 00 |
| " post office (main) | 38,343 08 | 9,592 77 | | 47,935 85 |
| " post office, power for elevator, etc | | | 4,224 37 | 4,224 37 |
| " postal station "A", St. James street | 221,725 52 | 16 10 | | 221,741 62 |
| " postal station "B", St. Catherine, west | 6,063 80 | 2,211 13 | | 8,274 93 |
| " postal station "C", 802 St. Catherine St, east | 1,080 82 | 429 73 | | 1,510 55 |
| " postal station "D", Point St. Charles | | 2,362 64 | | 2,362 64 |
| " postal station "E", Mile End | | 13 00 | | 13 00 |
| " postal station "F", Notre Dame and Richmond sts | 33,956 94 | 4 00 | | 33,960 94 |
| " postal station "G", St. Lawrence division | 3,039 95 | | | 3,039 95 |
| " postal station "H", to replace postal station "B" | 78,220 50 | 115 00 | 389 49 | 78,724 99 |
| " postal station "L", Westmount | 71,987 83 | 199 10 | | 72,186 93 |
| " postal station "M", Maisonneuve | 2,530 30 | 125 37 | | 2,655 67 |
| " postal station "N", 101 St. Catherine street, East | | 989 07 | | 989 07 |
| " postal station "S", Emard Ward | | 137 51 | | 137 51 |
| " Windsor Station, mail room | 503 25 | | | 503 25 |
| Murray Bay post office, etc | 6,628 98 | | | 6,628 98 |
| Nicolet post office, etc | | 41 73 | | 41 73 |
| Nominingue immigration building | | 10 45 | | 10 45 |
| Peribonka immigration building | | 26 13 | | 26 13 |
| Pierreville post office, etc | | 8 62 | | 8 62 |
| Plessisville post office, etc | | 38 10 | | 38 10 |
| Quebec Agriculture Dept., seeds branch, Ste. Anne street | | 165 75 | | 165 75 |
| " archives office, 23 St. Louis street | | 446 90 | | 446 90 |
| " citadel, Governor General's quarters | | 3,567 97 | | 3,567 97 |
| " custom house | 5,223 95 | 6,259 03 | | 11,482 98 |
| " " power for machinery | | | 700 00 | 700 00 |

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PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Continued. | | | | |
| Quebec District Engineer's office (Merger building) 103 St. John street | | 229 29 | | 229 29 |
| " drill hall (extension) | 90,915 12 | | | 90,915 12 |
| " East (St. Roch) post office | | 290 00 | | 290 00 |
| " " " power for machinery | | | 37 50 | 37 50 |
| " examining warehouse | 1,979 24 | 119 33 | | 2,098 57 |
| " " " power for machinery | | | 175 00 | 175 00 |
| " immigration building (Louise Embankment) | 165,969 79 | 438 09 | 793 33 | 167,201 21 |
| " Savard park, immigration hospital | 4,598 50 | 961 74 | | 5,560 24 |
| " isolated cottages in Savard park | 201 96 | | | 201 96 |
| " marine agency, King's wharf | | 10 75 | | 10 75 |
| " marine school, 116 Mountain hill | | 123 75 | | 123 75 |
| " observatory roadway | 75 00 | 40 10 | | 115 10 |
| " ordnance stores | | 1,000 00 | | 1,000 00 |
| " post office (enlargement) | 134,449 28 | 2,800 59 | | 137,249 87 |
| " post office, power for machinery | | | 937 50 | 937 50 |
| " postal station "B", St. Peters street | 1,387 59 | 10 92 | | 1,398 51 |
| " St. Sauveur post office | 14,716 74 | 50 34 | | 14,767 08 |
| " Supt. of Government Telegraph, office | | 59 25 | | 59 25 |
| Richmond post office, etc | | 897 47 | | 897 47 |
| Rigaud post office | 1,283 48 | 53 13 | | 1,336 61 |
| Rimouski engineer's office | | 49 50 | | 49 50 |
| " post office, etc | | 20 00 | | 20 00 |
| Roberval immigration building | | 51 97 | | 51 97 |
| " post office, etc | 2,991 06 | 71 55 | | 3,062 61 |
| Rock Island post office, etc | 1,711 92 | 24 69 | | 1,736 61 |
| Ste. Agathe des Monts post office, etc | 23,944 00 | | | 23,944 00 |
| Ste. Anne de Bellevue post office, etc | | 25 90 | | 25 90 |
| Ste. Anne de la Pocatière experimental farm | | 234 15 | | 234 15 |
| Ste. Cunegonde post office, etc | | 1 25 | | 1 25 |
| Ste. Eustache post office, etc | | 10 15 | | 10 15 |
| St. Gabriel de Brandon post office | 14,816 33 | | | 14,816 33 |
| St. Georges East (Beauce) post office, etc | | 878 17 | | 878 17 |
| St. Henri post office, etc | | 108 65 | | 108 65 |
| St. Hyacinthe inland revenue building | | 877 33 | | 877 33 |
| " post office, etc | | 1,003 97 | | 1,003 97 |
| St. Jacques de L'Achigan public building | 71 25 | | | 71 25 |
| St. Jerome post office, etc | 714 11 | 159 54 | | 873 65 |
| St. John's custom-house | | 173 87 | | 173 87 |
| " post office, etc | | 252 49 | | 252 49 |
| St. Lambert, post office, etc | 12,184 70 | 5 00 | | 12,189 70 |
| St. Laurent post office, etc | 15,994 09 | | | 15,994 09 |
| St. Ours post office, etc | 559 92 | | | 559 92 |
| St. Romuald d'Etchemin post office, etc | 6,044 60 | | | 6,044 60 |
| Ste. Thérèse post office, etc | 13,232 94 | | | 13,232 94 |
| Shawinigan Falls post office, etc | 1,345 35 | 90 29 | | 1,435 64 |
| Shawville post office, etc | 1,223 84 | | | 1,223 84 |
| Sherbrooke post office, etc | | 2,708 19 | | 2,708 19 |
| Sorel post office, etc | 2,794 68 | 1,057 37 | | 3,852 05 |
| Sorel shipyard, Marine and Fisheries department | | 19 15 | | 19 15 |
| Stanstead Plain post office, etc | 20 00 | | | 20 00 |
| Terrebonne post office, etc | | 854 02 | | 854 02 |
| Thetford Mines post office, etc | | 300 52 | | 300 52 |
| Three Rivers public building (new) | 51,051 99 | | | 51,051 99 |
| " post office, etc | 683 00 | 598 09 | | 1,281 09 |
| Valcartier temporary post office | 16 37 | 1,065 00 | | 1,081 37 |
| Valleyfield post office, etc | 500 00 | 327 50 | | 827 50 |
| Verdun post office, etc | 8,551 11 | | | 8,551 11 |
| Victoriaville post office, etc | | 264 80 | | 264 80 |
| Waterville " " | 215 59 | | | 215 59 |
| Heating, lighting, water, etc. for all buildings in Quebec (for details see page 50) | | | 318,294 11 | 318,294 11 |
| Totals, *Quebec* | 2,204,686 72 | 60,760 48 | 326,244 20 | 2,591,691 40 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ottawa.* | | | | |
| Departmental buildings— | | | | |
| Customs building | 500,008 65 | | | 500,008 65 |
| Eastern block—addition | 75,286 62 | | | 75,286 62 |
| Langevin block, improvements to heating apparatus | 3,641 79 | | | 3,641 79 |
| Langevin block, new elevators, etc | 11,641 00 | | | 11,641 00 |
| Parliament buildings, improvements | 9,015 28 | | | 9,015 28 |
| Departmental and Parliament buildings generally— | | | | |
| Fire protection | 26,667 00 | | | 26,667 00 |
| Grounds (including Major's Hill park) | 16,447 75 | | 21,095 19 | 37,542 94 |
| Grounds, placing of service wires underground | 1,904 29 | | | 1,904 29 |
| Grounds, preservation of trees | 2,238 60 | | | 2,238 60 |
| Grounds, removal of snow | | | 2,837 57 | 2,837 57 |
| Power for elevators | | | 18,914 12 | 18,914 12 |
| Re-wiring of Parliament and Departmental Bldgs | 51,804 93 | | | 51,804 93 |
| Repairs and furniture | | 322,502 56 | | 322,502 56 |
| Steel fittings | 70,640 40 | | | 70,640 40 |
| Telephone service | | | 34,711 81 | 34,711 81 |
| Sites for new departmental buildings— | | | | |
| Sussex street | 50 68 | | | 50 68 |
| Wellington street east | 4,188 90 | | | 4,188 90 |
| Wellington street west | 701,435 64 | | | 701,435 64 |
| Astronomical observatory | 68,688 31 | | | 68,688 31 |
| Experimental farm | 102,946 49 | | | 102,946 49 |
| Fuel testing building | 6,525 50 | | | 6,525 50 |
| Mines building (Sussex street) | 1,830 34 | | | 1,830 34 |
| National art gallery (pictures) | 99,041 69 | | 720 00 | 99,761 69 |
| Post office, new elevator, etc | 273 78 | 69 10 | | 342 88 |
| Printing bureau | 4,448 69 | | | 4,448 69 |
| Royal Mint, refinery, (additional story) | 30,739 31 | | | 30,739 31 |
| Rideau Hall | 7,641 55 | 30,396 17 | 16,599 29 | 54,637 01 |
| Grounds 10,539 64 | | | | |
| Snow 1,929 34 | | | | |
| Fuel and light 17,000 00 | | | 30,188 98 | 30,188 98 |
| Watchman 720 00 | | | | |
| Victoria memorial museum | 27,216 54 | | | 27,216 54 |
| Heating, lighting, water, etc. for all buildings in Ottawa (for details see page 50) | | | 597,388 84 | 597,388 84 |
| Totals, Ottawa buildings | 1,824,323 73 | 352,967 83 | 722,455 80 | 2,899,747 36 |
| PUBLIC BUILDINGS. | | | | |
| *Ontario.* | | | | |
| Acton post office, etc | 14,584 27 | 9 00 | | 14,593 27 |
| Alexandria post office, etc | | 40 85 | | 40 85 |
| Almonte post office, etc. (addition and alterations) | 1,179 45 | 78 00 | | 1,257 45 |
| Amherstburg post office, etc | | 347 14 | | 347 14 |
| Arnprior post office, etc | | 109 75 | | 109 75 |
| Athens post office, etc | 1,731 87 | 27 62 | | 1,759 49 |
| Aurora post office, etc | 18,725 62 | | | 18,725 62 |
| Aylmer West post office, etc | 19,889 11 | 36 46 | | 19,925 57 |
| Barrie drill hall | 9,780 38 | | | 9,780 38 |
| Barrie post office, addition | 5,778 91 | 75 71 | | 5,854 62 |
| Belleville post office, etc | 5,328 70 | 606 22 | | 5,934 92 |
| Berlin post office, etc | 2,211 50 | 363 26 | | 2,574 76 |
| Bowmanville post office, etc | | 707 90 | | 707 90 |
| Bracebridge post office, etc | 16,605 60 | 35 90 | | 16,641 50 |
| Brampton post office, etc | 5,117 83 | 287 16 | | 5,404 99 |
| Brantford armoury, parade ground | 250 00 | | | 250 00 |
| Brantford drill hall, new | 240 04 | | | 240 04 |
| Brantford post office | | 163 15 | | 163 15 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Continued. | | | | |
| Brantford public building, new | 91,763 11 | | | 91,763 13 |
| Brantford, Government's share of laying sewers, etc | 2,043 30 | | | 2,043 30 |
| Bridgeburg post office, etc | | 17 74 | | 17 74 |
| Brockville post office, etc | | 337 84 | | 337 84 |
| Brussels post office, etc | 2,554 45 | | | 2,554 45 |
| Burford post office, etc | 329 98 | | | 329 98 |
| Burk's Falls post office, etc | 100 53 | | | 100 53 |
| Campbellford post office, etc | 3,949 15 | | | 3,949 15 |
| Carleton Place post office, etc | 4,478 33 | 30 18 | | 4,508 51 |
| Cayuga post office, etc | 296 49 | 60 15 | | 356 64 |
| Chatham drill hall | 2,058 86 | | | 2,058 86 |
| Chatham post office, etc | | 429 42 | | 429 42 |
| Chesley post office, etc | 2,428 35 | 8 25 | | 2,436 60 |
| Chesterville post office, etc | | 90 | | 90 |
| Clinton post office, etc | 694 27 | 142 22 | | 836 49 |
| Cobalt post office, etc | 3,043 81 | 151 00 | | 3,194 81 |
| Cobourg post office, etc | | 216 64 | | 216 64 |
| Collingwood post office, etc | 75,024 17 | | | 75,024 17 |
| Copper Cliff " " | 16 90 | | | 16 90 |
| Cornwall post office, etc | 472 07 | 449 52 | | 921 59 |
| Deseronto post office, etc | | 592 70 | | 592 70 |
| Dresden post office, etc | | 401 40 | | 401 40 |
| Dundas post office, etc | 3,638 31 | 31 80 | | 3,670 11 |
| Durham post office, etc | 1,057 92 | | | 1,057 92 |
| Eganville post office, etc | 18,754 76 | | | 18,754 76 |
| Elmira post office, etc | 22,336 62 | | | 22,336 62 |
| Elora post office, etc | | 129 40 | | 129 40 |
| " " power for machinery | | | 5 50 | 5 50 |
| Essex post office, etc | | 455 19 | | 455 19 |
| Exeter post office, etc | 112 32 | | | 112 32 |
| Fergus post office, etc | | 136 16 | | 136 16 |
| " " power for machinery | | | 12 12 | 12 12 |
| Fort Frances, immigration building | | 4 75 | | 4 75 |
| Fort Frances post office, etc | 1,681 26 | | | 1,681 26 |
| Fort William customs examining warehouse | 127,732 42 | | | 127,732 42 |
| Fort William drill hall | 1 58 | | | 1 58 |
| Fort William immigration building | | 15 00 | | 15 00 |
| Fort William post office, etc | | 1,180 03 | | 1,180 03 |
| Galt drill hall | 34,812 00 | | | 34,812 00 |
| Galt post office, etc | 631 11 | 89 81 | | 720 92 |
| Gananoque custom-house | | 5 85 | | 5 85 |
| Gananoque post office | 2,271 00 | 91 78 | | 2,362 78 |
| Georgetown post office, etc | 76 10 | 1 50 | | 77 60 |
| Glencoe post office, etc | | 257 67 | | 257 67 |
| Goderich post office, etc | | 124 70 | | 124 70 |
| Gravenhurst post office, etc | 75 35 | | | 75 35 |
| Grimsby post office, etc | 12,740 79 | | | 12,740 79 |
| Guelph post office, etc | 732 75 | 885 91 | | 1,618 66 |
| Haileybury post office, etc | | 46 12 | | 46 12 |
| Hamilton armoury | 133 14 | | | 133 14 |
| Hamilton custom-house | | 346 25 | | 346 25 |
| Hamilton immigration building | | 136 15 | | 136 15 |
| Hamilton inland revenue bldg | | 200 11 | | 200 11 |
| Hamilton postal station "B" | 141 99 | 16 50 | | 158 49 |
| Hamilton post office, (enlargement and improvements) | 10,522 69 | 2,058 25 | | 12,580 94 |
| Hamilton post office, power for machinery | | | 72 10 | 72 10 |
| Hanover post office, etc | 25,020 31 | 3 50 | | 25,023 81 |
| Harriston post office, etc | | 236 42 | | 236 42 |
| Hawkesbury post office, etc | | 132 60 | | 132 60 |
| Hespeler post office, etc | 2,451 61 | 1 00 | | 2,452 61 |
| Huntsville post office, etc | 89 17 | | | 89 17 |
| Ingersoll drill hall | 732 10 | | | 732 10 |
| Ingersoll post office (addition) | 15,195 43 | 368 08 | | 15,563 51 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Continued. | | | | |
| Ingersoll post office (temporary) | 202 71 | | | 202 71 |
| Kemptville post office, etc | 14,972 33 | | | 14,972 33 |
| Kenora post office, etc | 3,120 73 | | | 3,120 73 |
| Kincardine post office, etc | 395 00 | 363 30 | | 758 30 |
| Kingston custom-house | 595 71 | 308 69 | | 904 40 |
| Kingston inland revenue building | | 213 56 | | 213 56 |
| Kingston post office | 3,412 50 | 1,044 52 | | 4,457 02 |
| Kingston Royal Military College, additional dormitory accommodation for cadets | 5,378 71 | | | 5,378 71 |
| Kingston Royal Military College, covered drill hall | 750 00 | | | 750 00 |
| Lakefield post office, etc | 19,808 19 | | | 19,808 19 |
| Leamington post office, etc | | 110 58 | | 110 58 |
| Lindsay post office, etc | 24,928 87 | 384 80 | | 25,313 67 |
| Listowel drill hall | 13,377 43 | | | 13,377 43 |
| Listowel post office, etc | | 1,713 65 | | 1,713 65 |
| London armoury, to enlarge site | 0 55 | | | 0 55 |
| London custom-house | 221 85 | 650 51 | | 872 36 |
| London post office, etc | 5,817 89 | 3,540 77 | | 9,358 66 |
| Markham post office, etc | 23 55 | 163 45 | | 187 00 |
| Midland post office, etc | 15,052 59 | 360 94 | | 15,413 53 |
| Mildmay post office, etc | 33 95 | 20 56 | | 54 51 |
| Millbrook post office, etc | 72 58 | | | 72 58 |
| Milton post office, etc | 16,387 62 | | | 16,387 62 |
| Milverton post office, etc | 17,666 15 | | | 17,666 15 |
| Mitchell post office, etc | | 25 82 | | 25 82 |
| Morrisburg post office, etc | 200 91 | | | 200 91 |
| Mount Forest post office, etc | | 91 66 | | 91 66 |
| Napanee drill hall | 20,883 46 | | | 20,883 46 |
| Napanee post office, etc. (electric wiring) | 928 63 | 882 82 | | 1,811 45 |
| Newmarket post office, etc | 26,459 09 | | | 26,459 09 |
| Niagara Falls post office, etc | 204 00 | 227 48 | | 431 48 |
| North Bay post office, etc | 2,649 29 | 1,258 88 | | 3,980 17 |
| Norwich post office, etc | 18,103 78 | | | 18,103 78 |
| Orangeville post office, etc | | 442 35 | | 442 35 |
| Orillia post office, etc. (addition) | 34,067 52 | 9 84 | 3 80 | 34,081 16 |
| Oshawa post office, etc. (addition) | 4,968 35 | 296 53 | | 5,264 88 |
| Owen Sound post office, etc | | 1,537 20 | | 1,537 20 |
| Palmerston post office, etc | 3,646 51 | 2 00 | | 3,648 51 |
| Paris post office, etc. (additiou) | 4,441 52 | 23 50 | | 4,465 02 |
| Parkhill post office, etc | | 39 05 | | 39 05 |
| Parry Sound post office, etc | 25 50 | 5 50 | | 31 00 |
| Pembroke drill hall | 35,032 40 | | | 35,032 40 |
| Pembroke post office, etc | 7,672 48 | 158 01 | | 7,830 49 |
| Perth post office, etc | 10 12 | 17 35 | | 27 47 |
| Peterborough custom house | | 170 34 | | 170 34 |
| Peterborough new public building, customs and inland revenue | 6,595 25 | | | 6,595 25 |
| Peterborough post office | | 1,416 18 | | 1,416 18 |
| Petrolea post office, etc | 314 21 | 58 41 | | 372 62 |
| Picton post office, etc | | 70 61 | | 70 61 |
| Port Arthur armoury and drill hall | 73,420 09 | | | 73,420 09 |
| Port Arthur customs examining warehouse | 100,190 84 | | | 100,190 84 |
| Port Arthur post office | 1,919 35 | 1,048 03 | | 2,967 38 |
| Port Colborne post office | | 2,358 48 | | 2,358 48 |
| Port Hope post office, etc | | 347 02 | | 347 02 |
| Port Perry post office, etc | 459 61 | 111 30 | | 570 91 |
| Port Stanley post office | 152 76 | | | 152 76 |
| Prescott custom-house | | 191 53 | | 191 53 |
| Prescott Marine and Fisheries buildings | | 37 50 | | 37 50 |
| Prescott post office, new boilers, etc | 25 00 | 656 02 | | 681 22 |
| Preston post office, etc | 30,827 23 | 1 00 | | 30,828 23 |
| Renfrew post office, etc | 495 00 | 107 59 | | 602 59 |
| St. Catharines post office, etc | 2,360 33 | 179 21 | | 2,539 54 |
| St. Mary's post office, etc | | 424 67 | | 424 67 |
| St. Thomas post office, etc | | 393 74 | | 393 74 |
| Sandwich post office, etc | | 57 00 | | 57 00 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Concluded. | | | | |
| Sarnia post office, etc | 2,000 00 | 923 82 | | 2,923 82 |
| Sault Ste. Marie post office, etc | 4,332 14 | 346 13 | 357 69 | 5,035 96 |
| Seaforth immigration building | | 22 50 | | 22 50 |
| Seaforth post office, etc | 4,385 34 | 75 17 | | 4,460 51 |
| Shelburne post office, etc | 29,708 18 | 1 80 | | 29,709 98 |
| Simcoe post office, etc | | 46 92 | | 46 92 |
| Smiths Falls post office, etc | 20,008 96 | 29 55 | | 20,038 51 |
| Southampton post office, etc | 23 65 | 1 00 | | 24 65 |
| Steelton post office, etc | 28,606 11 | | | 28,606 11 |
| Stratford post office, etc. (addition) | 3 00 | 483 37 | | 486 37 |
| Strathroy post office, etc | | 65 10 | | 65 10 |
| Sudbury post office, etc | 94,333 07 | 41 50 | | 94,374 57 |
| Tilbury post office, etc | 2,935 21 | 60 72 | | 2,995 93 |
| Tilsonburg post office, etc | | 238 62 | | 238 62 |
| Toronto—alien registration office, 34 Adelaide street | | 121 55 | | 121 55 |
| " Agriculture Dept., seeds branch | | 308 59 | | 308 59 |
| " customs examining warehouse, site for new building | 321,196 38 | | | 321,196 38 |
| " customs examining warehouse (power for machinery) | | | 189 52 | 189 52 |
| " custom-house | 2,506 56 | 411 03 | | 2,917 59 |
| " custom-house (power for elevators) | | | 132 32 | 132 32 |
| " express customs office | 2,145 56 | 631 30 | 65 76 | 2,842 62 |
| " immigration building | | 881 40 | | 881 40 |
| " inland revenue and assistant receiver general's office | 345 02 | 998 57 | | 1,343 59 |
| " inland revenue building, power for machinery | | | 6 30 | 6 30 |
| " marine and fishery agency | | 5 18 | | 5 18 |
| " meteorological observatory | | 367 85 | | 367 85 |
| " military buildings (barracks) | 6,173 00 | | | 6,173 00 |
| " parcel post, 52 Adelaide street | | 303 10 | | 303 10 |
| " post office garages for motor trucks | | 256 33 | 186 78 | 443 11 |
| " post office (present building) | 14,216 67 | 1,466 28 | | 15,682 95 |
| " post office, power for elevators | | | 392 50 | 392 50 |
| " post office (site for enlargement) | 297,855 44 | | | 297,855 44 |
| " postal station "A" | | 2,573 22 | | 2,573 22 |
| " postal station "A", power for machinery | | | 260 96 | 260 96 |
| " postal station "B" | | 314 07 | | 314 07 |
| " postal station "C" | | 639 47 | | 639 47 |
| " postal station "D" | | 817 04 | | 817 04 |
| " postal station "E" | 634 89 | 27 83 | | 662 72 |
| " postal station "F" | 959 56 | 207 35 | | 1,166 91 |
| " postal station "G" | 63,169 83 | 222 52 | | 63,392 35 |
| " postal station "H" | | 520 09 | | 520 09 |
| " postal station "K" (North) | 3,355 36 | 348 34 | | 3,703 70 |
| " steamship inspector's office | | 83 14 | | 83 14 |
| Trenton post office, etc | 3,103 24 | 728 99 | | 3,832 23 |
| Uxbridge post office, etc | 3,291 85 | 16 77 | | 3,308 62 |
| Walkerton post office, etc | | 25 15 | | 25 15 |
| Walkerville post office, etc | 34,947 85 | | | 34,947 85 |
| Wallaceburg post office, etc | 888 79 | | | 888 79 |
| Waterloo post office, etc | | 1,550 74 | | 1,550 74 |
| Watford post office, etc | 319 79 | 1 00 | | 320 79 |
| Welland post office, etc | | 1,959 64 | | 1,959 64 |
| West Lorne post office, etc | 160 95 | | | 160 95 |
| Whitby post office, etc | | 54 34 | | 54 34 |
| Wiarton post office, etc | 2,087 05 | | | 2,087 05 |
| Windsor drill hall extension | 112 32 | | | 112 32 |
| Windsor post-office, etc | 2,193 65 | 612 91 | | 2,806 56 |
| Wingham post office, etc | | 340 16 | | 340 16 |
| Woodstock post office, etc | 47 70 | 180 53 | | 228 23 |
| Heating, lighting, water, etc., for all buildings in Ontario, exclusive of Ottawa (for details see page 53) | | | 241,385 87 | 241,385 87 |
| Totals, Ontario, exclusive of Ottawa | 2,035,937 04 | 53,513 44 | 243,071 22 | 2,332,521 70 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Manitoba.* | | | | |
| Altamont drill hall | 6 25 | | | 6 25 |
| Boissevain post office, etc | 398 92 | | | 398 92 |
| Brandon experimental farm | 8,206 27 | | | 8,206 27 |
| Brandon immigration building | | 48 80 | | 48 80 |
| Brandon post office, addition | | 203 40 | | 203 40 |
| Brandon public building (new) | 89 85 | | | 89 85 |
| Carberry post office, etc | 2,334 82 | | | 2,334 82 |
| Carman post office, etc | 30,906 49 | | | 30,906 49 |
| Dauphin forestry branch (Malcolm building) | | 1,614 58 | | 1,614 58 |
| Dauphin post office, etc | | 2 00 | | 2 00 |
| Deloraine immigration building | | 326 30 | | 326 30 |
| Elkhorn post office | 261 53 | | | 261 53 |
| Emerson immigration building | | 43 00 | | 43 00 |
| Emerson post office, etc | | 1,356 53 | | 1,356 53 |
| Gretna post office, etc | 823 72 | | | 823 72 |
| Manitou post office, etc | 611 58 | | | 611 58 |
| Melita post office, etc | 218 15 | | | 218 15 |
| Minnedosa post office, etc | 14,718 52 | 29 35 | | 14,747 87 |
| Morden post office, etc | 4,789 49 | 48 85 | | 4,838 34 |
| Neepawa post office, etc | 116 08 | 76 15 | | 192 23 |
| North Transcona, grain inspection building | 1,536 86 | | | 1,536 86 |
| Oak Lake post office, etc | 356 64 | | | 356 64 |
| Portage la Prairie armoury | 6 50 | 126 44 | | 132 94 |
| Portage la Prairie examining warehouse, Tupper street | | 51 15 | | 51 15 |
| Portage la Prairie post office, etc | | 706 14 | | 706 14 |
| St. Boniface post office, etc | 2,713 64 | 87 95 | | 2,801 59 |
| St. James drill hall | 107 03 | | | 107 03 |
| Selkirk post office, etc | | 20 75 | | 20 75 |
| Souris drill hall | 609 12 | | | 609 12 |
| " post office, etc | | 855 07 | | 855 07 |
| Stonewall post office, etc | 20,909 90 | | | 20,909 90 |
| Virden post office, etc | 19,741 03 | | | 19,741 03 |
| Winnipeg archives office (Boyd building) | | 6 00 | | 6 00 |
| " custom-house (old post office) | 3,413 38 | 3,114 51 | | 6,527 89 |
| " custom-house, power for machinery | | | 130 30 | 130 30 |
| " drill hall central | 296,922 46 | | | 296,922 46 |
| " examining warehouse | 2,968 47 | 234 50 | | 3,202 97 |
| " examining warehouse, power for machinery | | | 179 66 | 179 66 |
| " grain exhibit building (immigration building No. 5) | | 123 00 | | 123 00 |
| " immigration building No. 1 | 1,750 00 | | | 1,750 00 |
| " immigration buildings | 1,399 18 | 4,183 68 | | 5,582 86 |
| " immigration buildings, fire alarm system | 8,989 00 | | | 8,989 00 |
| " immigration buildings, power for elevators | | | 50 08 | 50 08 |
| " immigration building (new) | 158,868 00 | | | 158,868 00 |
| " hydrographic survey office (Chamber of Commerce building) | | 18 10 | | 18 10 |
| " Indian affairs and weights and measures office (Chamber of Commerce building) | | 669 81 | | 669 81 |
| " Interior Department (Chamber of Commerce building) | | 7 96 | | 7 96 |
| " North, drill hall Mackray avenue and McGregor Street | 45,155 52 | | | 45,155 52 |
| " post office | 11,349 68 | 3,939 81 | | 15,289 49 |
| " post office, power for machinery | | | 555 93 | 555 93 |
| " postal station "A" | | 728 68 | | 728 68 |
| " postal station "B" | 3,067 65 | | 7 29 | 3,074 94 |
| " postal station "B", grain research laboratory | 7,125 00 | | | 7,125 00 |
| " postal station "B", inland revenue laboratory | 1,000 00 | | | 1,000 00 |
| " postal station "C" (south) | 2,270 75 | 23 47 | | 2,294 22 |
| " postal station "D" (west) | 2,523 75 | 100 44 | | 2,624 19 |
| " public buildings, arrears of claims of municipality | | | 11,997 88 | 11,997 88 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Manitoba*—Concluded. | | | | |
| Winnipeg railway commissioner's office (Boyd building) | | 590 40 | | 590 40 |
| " Union Station, mail room | | 78 70 | | 78 70 |
| " resident architect's office (Lindsay building) | | 66 50 | | 66 50 |
| Heating, lighting, water, etc. for all buildings in Manitoba (for details see page 54) | | | 104,736 87 | 104,736 87 |
| Totals, *Manitoba* | 656,265 23 | 19,482 02 | 117,658 01 | 793,405 26 |
| *Saskatchewan.* | | | | |
| Battleford post office, etc | 1,083 43 | 531 71 | | 1,615 14 |
| Estevan post office, etc | | 56 20 | | 56 20 |
| Fort à la Corne, forestry branch office | | 58 22 | | 58 22 |
| Gravelbourg immigration building | 13 35 | | | 13 35 |
| " post office, etc | | 2,467 47 | | 2,467 47 |
| Humboldt Dominion lands office | | 250 00 | | 250 00 |
| " post office, etc | 646 43 | 244 11 | | 890 54 |
| Indian Head experimental farm | 4,621 74 | | | 4,621 74 |
| " fisheries inspector's office | | 163 53 | | 163 53 |
| " forestry branch building | 539 25 | 22 80 | | 562 05 |
| Kindersly post office, etc | 10 00 | | | 10 00 |
| Lloydminster post office, etc | 1,833 24 | 225 60 | | 2,058 84 |
| Maple Creek Dominion lands office | | 221 43 | | 221 43 |
| " immigration building | | 30 00 | | 30 00 |
| " post office, etc | | 100 05 | | 100 05 |
| Melford post office, etc | 1,183 05 | 19 30 | | 1,202 35 |
| Moose Jaw customs examining warehouse | 10,166 30 | | | 10,166 30 |
| " Dominion lands office | | 24 55 | | 24 55 |
| " immigration hall | | 231 70 | | 231 70 |
| " new public building | 64,451 03 | | | 64,451 03 |
| " post office | | 713 66 | 212 43 | 926 09 |
| " railway mail service (Russell block) | | 11 79 | | 11 79 |
| North Battleford post office, etc | 20,479 14 | 153 75 | | 20,632 89 |
| Prince Albert District engineer's office | | 295 31 | | 295 31 |
| " drill hall | 64,961 08 | | | 64,961 08 |
| " forestry branch office (Baker building) | | 6 10 | | 6 10 |
| " post office, etc | 4,640 54 | 5,094 90 | | 9,735 44 |
| Regina customs parcel office | | 214 10 | | 214 10 |
| " Dominion lands office | | 28 49 | | 28 49 |
| " immigration building | | 424 70 | | 424 70 |
| " post office | 1,070 58 | 2,179 55 | 355 02 | 3,605 15 |
| Rosthern experimental farm | 3,961 21 | | | 3,961 21 |
| " post office, etc | 13 85 | | | 13 85 |
| Saskatoon customs examining warehouse | | 95 00 | | 95 00 |
| " Dominion lands office | | 519 42 | | 519 42 |
| " drill hall | 30 60 | | | 30 60 |
| " forest nursery station | 2,617 61 | | | 2,617 61 |
| " immigration building | 719 65 | 69 10 | | 878 75 |
| " inland revenue, etc. (Canada Life building) | | 845 27 | | 488 07 |
| " post office (old) | | 1,031 00 | | 1,035 20 |
| " public building (new) | 36,846 63 | | | 36,461 63 |
| Scott experimental farm | 5,359 20 | | | 5,359 20 |
| Swift Current post office, etc | 63 45 | 601 15 | | 664 60 |
| Weyburn post office, etc | | 939 90 | | 939 90 |
| Wilkie immigration building | 382 48 | | | 382 48 |
| " post office, etc | 153 47 | | | 153 47 |
| Yorkton post office, etc | 790 87 | 658 89 | | 1,449 76 |
| Heating, lighting, water, etc. for all buildings in Saskatchewan (for details see page 57) | | | 79,951 19 | 79,951 19 |
| Totals, *Saskatchewan* | 226,638 18 | 18,528 75 | 80,518 64 | 325,685 57 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Alberta.* | | | | |
| Athabaska Landing immigration hall | | 21 75 | | 21 75 |
| Banff, Dominion parks building | | 209 80 | | 209 80 |
| Bassano post office | 8,741 28 | | | 8,741 28 |
| Calgary accommodation for assistant receiver general | 40,115 00 | | | 40,115 00 |
| " customs office (Dominion Bank building) | | 259 55 | | 259 55 |
| " customs examining warehouse | 179,821 79 | | | 179,821 79 |
| " examining warehouse (David block) | | 33 70 | | 33 70 |
| " customs mail parcel (Westminster building) | | 298 25 | | 298 25 |
| " forestry and irrigation branches building | 1,615 00 | 144 05 | | 1,759 05 |
| " customs express (Sullivan building) | | 328 21 | | 328 21 |
| " Agriculture Department, seed division (Armstrong building) | | 24 20 | | 24 20 |
| " gas and electric inspector's office (Cadogan building) | | 143 75 | | 143 75 |
| " geological survey office (Burns building) | | 114 50 | | 114 50 |
| " immigration building | | 129 36 | | 129 36 |
| " irrigation commissioner's office (Blow building) | | 949 34 | | 949 34 |
| " lands office (Leeson & Lineham block) | | 779 02 | | 779 02 |
| " post office (new) | 136,636 37 | | | 136,636 37 |
| " post office, inspector and railway mail office (Canada Life building) | | 467 30 | | 467 30 |
| " post office (old) | | 753 21 | | 753 21 |
| " temporary post office | | 829 15 | | 829 15 |
| " weights and measures office | | 35 75 | | 35 75 |
| Castor post office, etc | 4,030 30 | | | 4,030 30 |
| Edmonton armoury (old D. L. office) | | 252 35 | | 252 35 |
| " customs examining warehouse | 103 50 | | | 103 50 |
| " district engineer's office | | 6 00 | | 6 00 |
| " Dominion lands office (Alexander block) | 2,182 03 | 1,002 23 | | 3,184 26 |
| " drill hall (new) | 149,929 51 | | | 149,929 51 |
| " immigration building | 328 26 | | | 328 26 |
| " meteorological station | | 245 50 | | 245 50 |
| " post office | 4,837 33 | 2,961 27 | | 7,798 60 |
| " post office, power for machinery | | | 615 26 | 615 26 |
| Edson custom-house | | 223 99 | | 223 99 |
| " immigration building | | 55 27 | | 55 27 |
| Entwistle immigration building | 1,171 87 | | | 1,171 87 |
| Grand Prairie immigration building | | 267 92 | | 267 92 |
| " post office, etc | | 125 00 | | 125 00 |
| Gronard Dominion lands office | 1,013 00 | 192 62 | | 1,205 62 |
| " immigration building | | 2 75 | | 2 75 |
| High River post office, etc | 321 97 | | | 321 97 |
| Jasper Park, superintendent's building | | 233 42 | | 233 42 |
| Lacombe experimental farm | 7,520 21 | | | 7,520 21 |
| Lethbridge custom-house and Dominion lands office | | 313 64 | | 313 64 |
| " experimental farm | 6,384 99 | | | 6,384 99 |
| " immigration building | | 774 52 | | 774 52 |
| " inland revenue office (Hull block) | | 177 67 | | 177 67 |
| " post office | | 307 92 | | 307 92 |
| " public building (new) | 66,181 34 | 20 16 | 30 35 | 66,231 85 |
| Macleod custom-house | | 734 21 | | 734 21 |
| Medicine Hat Dominion lands office | | 4 00 | | 4 00 |
| " immigration building | | 12 50 | | 12 50 |
| " post office, etc. (addition) | 27,047 34 | 600 10 | | 27,647 44 |
| North Cooking Lake forest ranger's office | | 4 04 | | 4 04 |
| Red Deer post office, etc | 3,420 00 | 39 60 | | 3,459 60 |
| Rocky Mountain Park superintendent's office | | 402 36 | | 402 36 |
| Strathcona immigration building | | 156 75 | | 156 75 |
| " post office, etc | 339 03 | 1,941 20 | | 2,280 23 |
| Vermilion immigration building | | 21 00 | | 21 00 |
| Wainwright buffalo park, Superintendent's office | | 55 85 | | 55 85 |
| " post office, etc | 69 54 | | | 69 54 |
| Wetaskiwin post office, etc | | 694 50 | | 694 50 |
| Heating, lighting, water, etc. for all buildings in Alberta (for details see page 58) | | | 102,331 36 | 102,331 36 |
| Totals, *Alberta* | 641,481 40 | 17,677 49 | 102,976 97 | 762,135 86 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *British Columbia.* | | | | |
| Abbotsford public building | | 205 00 | | 205 00 |
| Agassiz experimental farm | 7,142 71 | | | 7,142 71 |
| Anyox custom-house | | 60 50 | | 60 50 |
| Ashcroft post office, etc | 290 41 | | | 290 41 |
| Atlin post office, etc | 4,212 70 | | | 4,212 70 |
| Chase district engineer's office | | 40 00 | | 40 00 |
| Chilliwack immigration building | | 3 00 | | 3 00 |
| " post office, etc | | 80 75 | | 80 75 |
| Comox post office, etc | 2,844 13 | 7 75 | | 2,851 88 |
| Courtenay post office, etc | 325 15 | | | 325 15 |
| Cranbrook post office, etc | 1,413 90 | 1,859 12 | | 3,273 02 |
| Cumberland post office, etc | | 12 08 | | 12 08 |
| Duncan Station post office, etc | 13,522 91 | | | 13,522 91 |
| Fernie drill hall | 36 00 | | | 36 00 |
| " post office, etc | | 713 79 | | 713 79 |
| Grand Forks post office, etc | 3,004 83 | 595 36 | | 3,600 19 |
| Greenwood post office, etc | 30,632 77 | | | 30,632 77 |
| Invermere experimental farm | 563 55 | | | 563 55 |
| Kamloops Dominion lands office | | 809 99 | | 809 99 |
| " drill hall | 745 18 | | | 745 18 |
| " post office, etc | | 476 61 | | 476 61 |
| Kelowna post office, etc | | 47 47 | | 47 47 |
| Ladysmith post office, etc | | 115 00 | | 115 00 |
| Merritt post office, etc | 298 31 | 3 00 | | 301 31 |
| Midway railway station (trucks) | 77 94 | | | 77 94 |
| Mission city post office, etc | 80 57 | | | 80 57 |
| Nanaimo post office, etc | 1,107 61 | 64 85 | | 1,172 46 |
| Nelson district engineer's office | | 30 00 | | 30 00 |
| " post office, etc | | 259 51 | | 259 51 |
| New Hazelton post office, etc | 289 75 | 10 20 | | 299 95 |
| New Westminster fisheries and Indian offices | | 154 45 | | 154 45 |
| " post office, etc | 39,634 32 | 661 77 | | 40,296 09 |
| " post office, power for machinery | | | 291 65 | 291 65 |
| North Vancouver drill hall | 29,570 98 | | | 29,570 98 |
| " post office, etc | | 196 50 | | 196 50 |
| Penticton post office, etc | 327 16 | 42 90 | | 370 06 |
| Port Alberni post office, etc | 33,489 23 | | | 33,489 23 |
| Powell River post office, etc | 135 49 | | | 135 49 |
| Prince Rupert district engineer's office | | 70 00 | | 70 00 |
| " " drill hall | 32,994 41 | | | 32,994 41 |
| " immigration detention building | 4,884 47 | | | 4,884 47 |
| " quarantine station | 32,500 03 | | | 32,500 03 |
| " post office, etc | 4,938 65 | | | 4,938 65 |
| Revelstoke Dominion lands office | | 468 26 | | 468 26 |
| " post office, etc | | 768 14 | | 768 14 |
| Rossland post office | 2,766 33 | | | 2,766 33 |
| Saanichton experimental farm | | 25 10 | | 25 10 |
| Sidney experimental farm | | 29 65 | | 29 65 |
| " public building | 3,031 00 | | | 3,031 00 |
| Squamish post office, etc | 450 00 | | | 450 00 |
| Union Bay post office, etc | 5,600 30 | | | 5,600 30 |
| Vancouver C.P.R. railway station (mail room, postal station "A") | 1,677 76 | | | 1,677 76 |
| " detention building (new) | 148,042 03 | | | 148,042 03 |
| " D.P.W., Supt. of dredging office | | 504 55 | | 504 55 |
| " drill hall | 20,663 94 | | | 20,663 94 |
| " examining warehouse | 16,287 13 | 445 54 | | 16,732 67 |
| " examining warehouse, power for machinery | | | 684 00 | 684 00 |
| " immigration building | | 73 80 | | 73 80 |
| " marine agency, etc. (Empire building) | | 238 61 | | 238 61 |
| " labour department office | | 192 24 | | 192 24 |
| " post office | 10,086 41 | 461 14 | | 10,547 55 |
| " post office, power for machinery | | | 453 90 | 453 90 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| PUBLIC BUILDINGS. | $ cts. | $ cts. | $ cts. | $ cts. |
| *British Columbia*—Continued. | | | | |
| Vancouver post office (old) | 9,967 19 | 1,632 54 | | 11,599 73 |
| " postal station "B" | 8,370 50 | 286 50 | | 8,657 00 |
| " postal station "C" | 45,102 87 | 25 90 | | 45,128 77 |
| " (south) postal station "D" | 115 23 | | | 115 23 |
| " postal substation No. 6 (Fairview) | | 6 90 | | 6 90 |
| Vernon post office, etc. | | 251 26 | | 251 26 |
| Victoria customs parcel office | | 661 51 | | 661 51 |
| " district engineer's office | | 1,119 00 | | 1,119 00 |
| " drill hall | 149,983 02 | | | 149,983 02 |
| " examining warehouse (Ames-Holden building) | | 139 72 | 236 53 | 376 25 |
| " immigration detention hospital | 1,429 60 | | | 1,429 60 |
| " marine and fisheries office (old customhouse) | | 426 67 | | 426 67 |
| " meteorological observatory, Gonzales heights | 7,382 19 | | | 7,382 19 |
| " astronomical observatory, Little Saanich | 7,143 09 | | | 7,143 09 |
| " post office (old) | | 1,498 45 | | 1,498 45 |
| " to pay taxes due city for years 1912-1913 | | | 7,754 53 | 7,754 53 |
| " post office | 148,155 14 | 1,633 94 | 256 96 | 150,046 04 |
| Williams Head quarantine station | 75,028 37 | 180 00 | | 75,208 37 |
| Heating, lighting, water, etc., for all buildings in British Columbia (for details see page 59) | | | 119,595 56 | 119,595 56 |
| Totals, *British Columbia* | 906,345 26 | 17,589 02 | 129,273 13 | 1,053,207 41 |
| *Yukon Territory.* | | | | |
| Heating, lighting, water, etc., for all public buildings in Yukon Territory | | | 62,771 17 | 62,771 17 |
| Total, *Yukon Territory* | | | 62,771 17 | 62,771 17 |
| *Public Buildings Generally.* | | | | |
| Advertising coal tenders, Dominion buildings | | | 2,964 21 | 2,964 21 |
| Fittings and furniture generally (stock) | 8,537 48 | | | 8,537 48 |
| Flags for Dominion public buildings | | | 3,285 60 | 3,285 60 |
| Printing, stationery, instruments, travelling, etc. | | | 24,353 49 | 24,353 49 |
| Rural mail sorting cases and post office signs | 141 39 | | | 141 39 |
| Salaries of resident clerk of works | | | 46,057 78 | 46,057 78 |
| Totals, *Public Buildings generally* | 8,678 87 | | 76,661 08 | 85,339 95 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia.* | | | | | |
| Amherst Harbour improvements | | 17,113 89 | | | 17,113 89 |
| Anderson's Cove, new breakwater | | 971 77 | | | 971 77 |
| Annapolis Harbour improvements, ice piers | | 15,320 00 | | | 15,320 00 |
| Antigonish wharf | | 20 82 | | | 20 82 |
| Arichat retaining wall | | 99 57 | | | 99 57 |
| Arisaig wharf extension | | 1,950 68 | 902 59 | | 2,853 27 |
| Babin's Cove wharf | | 1,398 46 | | | 1,398 46 |
| Baddeck wharf | | 624 86 | | | 624 86 |
| Barachois, extension of training pier | | 699 96 | | | 699 96 |
| Bass River wharf | | 534 89 | | | 534 89 |
| Battery Point breakwater | | 5,850 99 | | | 5,850 99 |
| Bayfield Harbour breakwater, wharf | | 963 00 | | | 963 00 |
| Bay St. Lawrence, boat harbour | | 42 50 | | | 42 50 |
| Bear Cove (Digby Co.) breakwater extension | | 3,291 09 | | | 3,291 09 |
| Bear Cove (Halifax Co.) boat skid | | 1,699 35 | | | 1,699 35 |
| Beaver Harbour wharf | | 2,728 30 | | | 2,728 30 |
| Big Harbour (Victoria Co.) wharf | | | 39 37 | | 39 37 |
| Belliveau's Cove, repairs to breakwater | | | 5,011 34 | | 5,011 34 |
| Black Point wharf | | | 1,381 44 | | 1,381 44 |
| Blandford breakwater | | 15,603 02 | | | 15,603 02 |
| Blue Rocks breakwater (Antigonish) | | | 278 74 | | 278 74 |
| Bluff Head breakwater extension | | 2,976 27 | 199 29 | | 3,175 56 |
| Boularderie Centre wharf | | | 22 00 | | 22 00 |
| Breen's Pond breakwater extension | | 1 58 | | | 1 58 |
| Brighton public landing | | 4,463 19 | | | 4,463 19 |
| Brooklyn breakwater | | 46 06 | | | 46 06 |
| Burying Island (Canso) breakwater | | | 91 71 | | 91 71 |
| Caldwell's Cove breakwater | | 7,112 50 | | | 7,112 50 |
| Canning, approaches to wharfs | | 1,999 18 | | | 1,999 18 |
| Cape Negro (Swain's Cove) wharf | | 209 05 | | | 209 05 |
| Cape Rouge, breakwater | | | 212 30 | | 212 30 |
| Caribou Island, raising causeway, etc | | 48 94 | | | 48 94 |
| Carr's Brook wharf | | 320 00 | | | 320 00 |
| Centreville (Trout Cove) breakwater | | 8,886 86 | | | 8,886 86 |
| Chegoggin, extension of breakwaters | | 2,698 65 | | | 2,698 65 |
| Cheverie, wharf extension | | 13,484 24 | | | 13,484 24 |
| Chris Cove breakwater | | 2,992 25 | | | 2,992 25 |
| Cole Harbour wharf | | 247 50 | | | 247 50 |
| Comeau's Cove, breakwater | | 15,842 40 | | | 15,842 40 |
| Comeau's Hill, breakwater | | | 2,600 00 | | 2,600 00 |
| Cottage Cove, breakwater | | 153 93 | | | 153 93 |
| Cow Bay (Port Morien), breakwater | | 4,075 76 | | | 4,075 76 |
| Cribbin's Point, new wharf, etc | | 34 63 | 400 00 | | 434 63 |
| Craigmore, breakwater (See Long Point.) | | | | | |
| Dartmouth (Ferry wharves) | 2,944 05 | | | | 2,944 05 |
| Delorey's Beach, breakwater | | | 1 58 | | 1 58 |
| D'Escousse, wharf | | | 1,099 98 | | 1,099 98 |
| Devil's Island, breakwater | | 7,960 13 | | | 7,960 13 |
| Digby Harbour, pier renewals | 39,670 65 | | 2,000 65 | | 41,671 30 |
| Drum Head (warehouse) | | | 3 90 | | 3 90 |
| Dublin Shore | | | 40 09 | | 40 09 |
| East Berlin, breakwater | | | 599 90 | | 599 90 |
| East Bay (north side), wharf | | | 1,000 00 | | 1,000 00 |
| East Chezzetcook (Crab Beach), breakwater extension | | 1,589 36 | | | 1,589 36 |
| East Chezzetcook (Head), wharf | | 762 99 | | | 762 99 |
| East Chezzetook (Red Island), breakwater | | | 1,098 72 | | 1,098 72 |
| East Chezzeteook, wharf extension and shed | | 1,399 31 | | | 1,399 31 |
| East Ferry, breakwater-wharf | | 7,042 27 | | | 7,042 27 |
| Eastern Passage, breakwater | | | 698 91 | | 698 91 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia*—Continued. | | | | | |
| East Port Hebert, mooring pier | | 1,195 65 | | | 1,195 65 |
| East Pubnico, wharf | | | 150 90 | | 150 90 |
| East Ragged Island, wharf | | | 651 87 | | 651 87 |
| East River (Pictou Co.), improvements | 45,036 12 | 170,327 68 | | | 215,363 80 |
| Ecum Secum (Halifax County), breakwater, wharf | | 2,698 84 | | | 2,698 84 |
| Evan's Point, breakwater | | 1 58 | | | 1 58 |
| Feltzen South (Spindler's Cove), breakwater | | 2,122 90 | | | 2,122 90 |
| Feltzen South, wharf (shed) | | 600 00 | | | 600 00 |
| Finlay Point, wharf | | | 349 82 | | 349 82 |
| Fort Lawrence | 6,897 40 | | | | 6,897 40 |
| Fox Island, breakwater extension | | 2,611 24 | | | 2,611 24 |
| Fox Point, breakwater | | 63 21 | | | 63 21 |
| Freeport breakwater, pier shed | | 98 32 | | | 98 32 |
| French River, extension of pier | | 133 84 | | | 133 84 |
| Friar's Head, removal of boulders | | 324 07 | | | 324 07 |
| Gabarus Harbour, beach protection | | 254 50 | | | 254 50 |
| Glace Bay, beach protection | | | 329 96 | | 329 96 |
| Goat Island, wharf | | 69 80 | | | 69 80 |
| Grand Etang, breakwater | | | 799 81 | | 799 81 |
| Grand Narrows, wharf | | | 1,499 94 | | 1,499 94 |
| Green's Harbour, breakwater | | 999 48 | | | 999 48 |
| Grosses Coques, breakwater | | 2,000 00 | | | 2,000 00 |
| Gulliver's Cove, breakwater | | 91 11 | | | 91 11 |
| Gunning Cove, wharf | | 506 02 | | | 506 02 |
| Halifax dry-dock (new) | 814 35 | 144 88 | | | 959 23 |
| Hampton, extension of breakwater-wharf | | 3,000 00 | | | 3,000 00 |
| Hantsport, wharf | | 21,870 33 | | | 21,870 33 |
| Horton Landing, wharf | | | 906 54 | | 906 54 |
| Indian Harbour, wharf | | 565 47 | | | 565 47 |
| Indian Brook, flats | | | 449 68 | | 449 68 |
| Indian Point, wharf | | 5,027 91 | | | 5,027 91 |
| Inverness, harbour improvements | | 1,308 58 | | | 1,308 58 |
| Iona (new) wharf | | | 1,100 48 | | 1,100 48 |
| Iona (old) wharf | | | 150 15 | | 150 15 |
| Irish Cove, wharf | | | 399 10 | | 399 10 |
| Jamesville, breakwater | | 2,066 01 | | | 2,066 01 |
| Judique (Baxter's), road to wharf | | 400 19 | | | 400 19 |
| Kelly's Cove, extension of breakwater | | 9,206 73 | 99 10 | | 9,305 83 |
| Kraut Point, wharf extension | | 416 33 | | | 416 33 |
| L'Ardoise, breakwater | | | 199 86 | | 199 86 |
| L'Ardoise, beach protection | | | 320 00 | | 320 00 |
| Little Harbour (Pictou Co.), wharf | | 18 50 | | | 18 50 |
| Little Harbour (Lunenburg) | 8,016 16 | | | | 8,016 16 |
| Little Bass River, wharf | | 2,348 09 | | | 2,348 09 |
| Little Tancook, extension of breakwater, etc | | 33 92 | | | 33 92 |
| Liverpool harbour | 16,377 62 | | | | 16,377 62 |
| Livingston's Cove, wharf | | | 1,599 90 | | 1,599 90 |
| Lockeport (Shelburne Co.), beach protection | 17,306 49 | | 936 76 | | 18,243 25 |
| Long Cove, breakwater | | 1,199 80 | | | 1,199 80 |
| Long Point (Lunenburg Co.), breakwater | | 134 44 | | | 134 44 |
| Long Point (Craigmore, Inverness Co.), breakwater | | | 199 60 | | 199 60 |
| Lower Burlington, wharf | | 2,573 00 | | | 2,573 00 |
| Lunenburg, harbour improvements | 11,025 80 | 19 32 | | | 11,045 12 |
| McAra's Brook, boat landing | | 799 97 | | | 799 97 |
| McNair's Cove, breakwater, wharf | | | 398 64 | | 398 64 |
| Mabou Bridge, wharf enlargement | | 2,067 00 | | | 2,067 00 |
| Maitland, ferry landing | | 991 90 | | | 991 90 |
| Malagash, wharf | | | 946 85 | | 946 85 |
| Malignant Cove, breakwater | | 950 13 | | | 950 13 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia*—Continued. | | | | | |
| Marble Mountain, wharf, (warehouse) | | 246 47 | | | 246 47 |
| Margaree Harbour, breakwater | 12,574 93 | | 4,031 00 | | 16,605 93 |
| Margaretsville, breakwater | | | 99 02 | | 99 02 |
| Marion Bridge, wharf | | | 16 95 | | 16 95 |
| Meat Cove, breakwater | | 537 84 | | | 537 84 |
| Meteghan, breakwater | | | 504 54 | | 504 54 |
| Meteghan river, breakwater | | | 442 37 | | 442 37 |
| Middle River, sheer dams | | 400 00 | | | 400 00 |
| Middle River, (Lower), sheer dams | | 350 64 | | | 350 64 |
| Mill Cove, breakwater extension | 1,714 99 | 293 46 | | | 2,008 45 |
| Mill Creek, breakwater and wharf | | 3,999 90 | | | 3,999 90 |
| Mira Ferry, wharf | | 855 42 | | | 855 42 |
| Mochelle, wharf | | 71 32 | | | 71 32 |
| Morden, breakwater | | | 24 50 | | 24 50 |
| Mosher's Bay, breakwater | | 2,960 50 | | | 2,960 50 |
| New Harbour, breakwater | | | 992 46 | | 992 46 |
| Newport Landing, wharf extension | | 3,533 93 | | | 3,533 93 |
| Noel, breakwater wharf | | | 1,499 26 | | 1,499 26 |
| North Belleville, wharf | | 210 20 | | | 210 20 |
| North Gut (St. Ann's), wharf | | | 299 84 | | 299 84 |
| North West Cove (see Tancook Island) | | | | | |
| Ogden's Pond, groyne, etc | | 1,886 30 | | | 1,886 30 |
| Osburn's, breakwater extension | | 4,997 90 | | | 4,997 90 |
| Owl's Head, breakwater, wharf extension, etc | | 1,799 87 | | | 1,799 87 |
| Parrsborough | 4,881 30 | | | | 4,881 30 |
| Parker's Cove, breakwater extension | | 6,672 91 | | | 6,672 91 |
| Peggy's Cove, breakwater | | 1,430 86 | | | 1,430 86 |
| Pembroke, breakwater | | | 974 86 | | 974 86 |
| Pereaux (Delhaven), wharf | | | 200 00 | | 200 00 |
| Petit de Grat | 8,000 34 | | | | 8,000 34 |
| Picket Pier, wharf | | | 1,000 00 | | 1,000 00 |
| Pictou Island Wharf (West) | | | 1,200 00 | | 1,200 00 |
| Piper's Cove, breakwater, pier | | 377 25 | | | 377 25 |
| Plaster (Baddeck) wharf | | 29 00 | | | 29 00 |
| Pleasant Bay, wharf | | 120 00 | | | 120 00 |
| Portapique, wharf | | | 749 37 | | 749 37 |
| Port Beckerton, wharf (fence) | | 25 15 | | | 25 15 |
| Port Clyde, wharf | | 1,199 55 | | | 1,199 55 |
| Porter's Lake, boat channel to Three Fathom Harbour | | 299 32 | | | 299 32 |
| Port Hastings, wharf approach | | 896 03 | | | 896 03 |
| Port Hawkesbury | 6,595 36 | | | | 6,595 36 |
| Port Hood, wharf | 6,538 72 | | 5,199 11 | | 11,737 83 |
| Port Joli, breakwater extension | | 2,971 09 | | | 2,971 09 |
| Port Maitland, breakwater | | | 954 59 | | 954 59 |
| Port Mulgrave | 7,357 92 | | | | 7,357 92 |
| Port Phillip, wharf | | | 230 75 | | 230 75 |
| Port Wade, pier | | | 4,000 00 | | 4,000 00 |
| Portuguese Cove, boat skid | | 398 54 | | | 398 54 |
| Pugwash, wharf | | | 2,200 04 | | 2,200 04 |
| Rainy Cove, wharf | | 1,999 99 | | | 1,999 99 |
| Rays Creek, wharf | | | 619 38 | | 619 38 |
| River Hebert, wharf | | | 253 41 | | 253 41 |
| Round Hill, wharf | | | 274 12 | | 274 12 |
| Round Island, Mira Bay, breakwater | | 236 07 | | | 236 07 |
| St. Ann's (North Gut) wharf, (see north Gut) | | | | | |
| St. Joseph, breakwater, (Inverness Co.) | | | 413 73 | | 413 73 |
| Salmon River (Digby Co.), wharf extension | | 2,490 84 | | | 2,490 84 |
| Salmon River (Cape Breton Co.), wharf | | 784 56 | | | 784 56 |
| Sandy Cove, breakwater | | | 771 07 | | 771 07 |
| Sandford, breakwater | | 3,914 87 | 3,075 12 | | 6,989 99 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Nova Scotia*—Continued. | | | | | |
| Saw Pit, wharf | | | 48 28 | | 48 28 |
| Seaforth, breakwater | | 8,451 01 | | | 8,451 01 |
| Shad Bay, breakwater | | 2,352 64 | | | 2,352 64 |
| Shag Harbour, wharf | | | 411 36 | | 411 36 |
| Sheet Harbour Passage, wharf | | 1,993 72 | | | 1,993 72 |
| Shelburne, wharf (shed) | | 1,516 71 | | | 1,516 71 |
| Short Beach, breakwater | | | 30 26 | | 30 26 |
| Sight Point, wharf | | | 103 26 | | 103 26 |
| Skinner's Cove, boat harbour | | 314 32 | | | 314 32 |
| Smith's Cove, breakwater | 5,047 30 | 1,019 87 | | | 6,067 17 |
| Smiley's Point, breakwater | | | 14 46 | | 14 46 |
| South Bay, Ingonish, wharf extension | | 450 44 | | | 450 44 |
| South Cove (Victoria Co.), freight shed | | 147 21 | | | 147 21 |
| South Ingonish, wharf extension | | 2 40 | | | 2 40 |
| South Lake (Lakevale) protection work | | 2,194 97 | | | 2,194 97 |
| Spanish Ship Bay, wharf | | 679 75 | | | 679 75 |
| Spindler's Cove (see Feltzen) | | | | | |
| South Spry Bay (Henley's), wharf | | 3,188 50 | | | 3,188 50 |
| Spry Bay (Leslie's), wharf | | | 1,205 25 | | 1,205 25 |
| Sterling Brook, wharf | 440 58 | 33 30 | | | 473 88 |
| Stony Island, breakwater | | 1,594 51 | | | 1,594 51 |
| Summerville, wharf | | | 517 93 | | 517 93 |
| Surette's Island (Yarmouth Co.), wharf | | | 215 00 | | 215 00 |
| Swim's Point, wharf | 2,424 10 | | 449 93 | | 2,874 03 |
| Sydney Harbour;— | | | | | |
| South Bar (crib work) | | 566 25 | | | 566 25 |
| Whitney Pier | | 748 34 | | | 748 34 |
| Tancook Island, breakwater at Northwest Cove | | 408 43 | | | 408 43 |
| Tangier, wharf extension | | 4,259 22 | | | 4,259 22 |
| Terence Bay, wharf extension | | 2,698 43 | 138 32 | | 2,836 75 |
| The Thrum (Upper Port Latour) beach protection | | | 125 00 | | 125 00 |
| Tidnish, wharf | | | 1,042 10 | | 1,042 10 |
| Tracadie Harbour, improvements | | 31 37 | | | 31 37 |
| Trout Cove, (see Centreville) | | | | | |
| Turner's Island (Halifax Co.) wharf | | | 5 74 | | 5 74 |
| Upper Prospect, breakwater extensioa | | 2,684 32 | 95 56 | | 2,779 88 |
| Victoria Bridge, wharf (warehouse) | | 91 52 | | | 91 52 |
| Vogler's Cove, breakwater and landing skids | | 1,156 19 | | | 1,156 19 |
| Walton, wharf extension, etc | | 9,590 01 | | | 9,590 01 |
| West Arichat, breakwater | 3,676 31 | | 1,199 61 | | 4,875 92 |
| West Chezzetcook, breakwater | | 879 87 | | | 879 87 |
| West Dover, breakwater | | 237 82 | | | 237 82 |
| Western Shore, wharf | | 84 79 | | | 84 79 |
| Western Head (Queens Co.), breakwater exteasion | | | 192 54 | | 192 54 |
| West Head (Cape Sable Island), breakwater extension | | 699 98 | | | 699 98 |
| West Wood Harbour, wharf extension | | 2,984 35 | | | 2,984 35 |
| Weymouth Harbour | 2,337 27 | | | | 2,337 27 |
| White Head, warehouse | | | 10 00 | | 10 00 |
| White Point, breakwater | | 417 67 | | | 417 67 |
| Whitewaters, wharf | | | 25 00 | | 25 00 |
| Whycocomagh, wharf (warehouse) | 473 19 | | 16 20 | | 489 39 |
| Willow Cove, widening channel, etc | | 2,995 60 | | | 2,995 60 |
| Windsor, harbour improvements | 1,911 50 | | 866 95 | | 2,778 45 |
| Wolfville, wharf and harbour improvements | | 56 15 | | | 56 15 |
| Yarmouth, harbour | 4,038 40 | 4,227 28 | | | 8,265 68 |
| Young's Cove, breakwater | | 3,984 97 | | | 3,984 97 |
| Generally | 7,881 47 | | | 11,115 29 | 18,996 76 |
| Totals, Nova Scotia | 223,982 32 | 499,209 31 | 67,933 03 | 11,115 29 | 802,239 95 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. |
| *Prince Edward Island.* | | | | | |
| Alberton, wharf | | | 1,983 12 | | 1,983 12 |
| Bay Fortune, breakwater | | | 1,995 87 | | 1,995 87 |
| Bayview, wharf | 874 46 | | 940 73 | | 1,815 19 |
| Belfast, pier | 3,201 45 | | 1,902 76 | | 5,104 21 |
| Belle river | 12,255 15 | | | | 12,255 15 |
| Bonshaw (*see* West River) | | | | | |
| Cardigan, ferry wharf | 8,524 17 | 7,757 00 | | | 16,281 17 |
| China Point, pier | | | 253 21 | | 253 21 |
| Charlottetown harbour | 20,408 26 | | | | 20,408 26 |
| Clifton, wharf | | | 1,161 83 | | 1,161 83 |
| Cooper's Shore (Port Hill), wharf extension | | 2,088 15 | | | 2,088 15 |
| Cove Head, shear dam extension | | 2,502 50 | | | 2,502 50 |
| East river (McConnell's wharf) | 674 51 | | | | 674 51 |
| Franklyn Point (North river) | 748 51 | 15,602 50 | | | 16,351 01 |
| French river, wharf | 4,065 73 | | | | 4,065 73 |
| Georgetown, wharf | 274 90 | | | | 274 90 |
| Graham's Pond, reconstruction of breakwater | | 1,491 82 | | | 1,491 82 |
| Grand river, ferry slips | 1,590 49 | 1,434 26 | | | 3,024 75 |
| Hurd's Point, pier | | | 286 52 | | 286 52 |
| Higgins Shore, pier | | | 149 99 | | 149 99 |
| Kier's Shore, pier | | | 114 91 | | 114 91 |
| Little Sands, wharf | | 18,767 12 | | | 18,767 12 |
| McArthur's Landing (West River) | | 566 66 | | | 566 66 |
| McAulay's Shore (*see* Pinette Bay) | | | | | |
| Miminegash Harbour, repairs | | | 999 22 | | 999 22 |
| Montague, Lambert's pier | | | 123 53 | | 123 53 |
| Mount Stewart, wharf | | | 174 75 | | 174 75 |
| Murray Harbour (South River) | 9,396 43 | | | | 9,396 43 |
| New London, harbour works | | | 1,076 18 | | 1,076 18 |
| North Lake, boat harbour | | 37 05 | | | 37 05 |
| North River, bridge wharf | | 3,722 50 | | | 3,722 50 |
| North River (*see* Franklyn point) | | | | | |
| Panmure Island, pier-head | | 998 36 | | | 998 36 |
| Pinette Bay (McAulay's Shore), wharf | | 7,630 50 | | | 7,630 50 |
| Pownal, pier | | | 335 33 | | 335 33 |
| Rocky Point, wharf | | 13,600 00 | | | 13,600 00 |
| Rustico Harbour, beach protection | 12,920 39 | 1,971 30 | | | 14,891 69 |
| Souris Harbour, breakwater extension | | 103,548 00 | | | 103,548 00 |
| Stanley Bridge | 1,696 70 | | | | 1,696 70 |
| Steven's Pier, Montague, wharf reconstruction | | 998 42 | | | 998 42 |
| Tignish Harbour, wharf | | 1,232 54 | | | 1,232 54 |
| Tracadie, breakwater | | 2,079 38 | | | 2,079 38 |
| Vernon River | 326 95 | | | | 326 95 |
| Victoria, Crapuad, wharf | 4,698 81 | 1,392 56 | | | 6,091 37 |
| West river, pier at Bonshaw | 252 51 | | | | 252 51 |
| West River, wharf at McEachern's | | 638 81 | | | 638 81 |
| Wood Islands, breakwater extension | | 7,165 00 | 372 82 | | 7,537 82 |
| Generally | 3,940 75 | | | 2,861 40 | 6,802 15 |
| Totals, Prince Edward Island | 85,850 17 | 195,224 43 | 11,870 77 | 2,861 40 | 295,806 77 |
| *New Brunswick.* | | | | | |
| Anderson's Hollow, breakwater, wharf | | | 2,305 74 | | 2,305 74 |
| Back Bay, wharf | | | 38 50 | | 38 50 |
| Bathurst, harbour improvements | 122,815 57 | | | | 122,815 57 |
| Bay du Vin, wharf | | | 6,106 01 | | 6,106 01 |
| Beaver Harbour, wharf | | | 84 80 | | 84 80 |
| Black River | 994 94 | | | | 994 94 |
| Boar's Head (*see* River Mills) | | | | | |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *New Brunswick*—Continued. | | | | | |
| Buctouche Beach, extension of breastworks and breakwater | 35,155 37 | 2,501 58 | | | 37,656 95 |
| Burnt Church, wharf | | | 24 00 | | 24 00 |
| Campbellton | 19,744 09 | | | | 19,744 09 |
| Campbellton, deep water wharf | | 19 57 | | | 19 57 |
| Campbellton, ferry wharf | | | 777 95 | | 777 95 |
| Cape Bald, breakwater, pier | | | 3,543 96 | | 3,543 96 |
| Caraquet | 770 25 | | | | 770 25 |
| Chamberlain Landing (*see* Stonehaven) | | | | | |
| Chance Harbour, wharf | | 250 00 | | | 250 00 |
| Chatham, wharf | 5,477 93 | 142 34 | | | 5,620 27 |
| Chockfish, breakwater | | | 912 32 | | 912 32 |
| Chocolate Cove (Deer Island), wharf | 26,646 87 | | | | 26,646 87 |
| Cocagne, wharf | | 7,350 03 | | | 7,350 03 |
| Cole's Island, River St. John | 803 14 | | | | 803 14 |
| Dalhousie, breakwater (T. P. Charleson's claim) | | 641 56 | | | 641 56 |
| Dalhousie, ferry wharf | | | 481 96 | | 481 96 |
| Dalhouise, harbour | 2,363 86 | | | | 2,363 86 |
| Dingee Creek and Shoal | 5,688 85 | | | | 5,688 85 |
| Dipper harbour, breakwater (T.P. Charleson's claim) | | 3,264 78 | | | 3,264 78 |
| Dorchester, wharf | | 2,948 00 | | | 2,948 00 |
| Douglas harbour (Queens County) | 1,598 43 | | | | 1,598 43 |
| Durham Wharf (River St. John) | 592 56 | 1,706 57 | | | 2,299 13 |
| Dykeman's Shoal | 7,411 71 | | | | 7,411 71 |
| Edgett's Landing, wharf | | 1,356 79 | | | 1,356 79 |
| Experimental Farm (below Fredericton) wharf | | 56 27 | | | 56 27 |
| Fairhaven, pier head | | 4,564 00 | | | 4,564 00 |
| Fredericton | 7,790 35 | | | | 7,790 35 |
| Gooseberry Cove, wharf | | 682 43 | | | 682 43 |
| Grande Anse, new groyne | | 274 74 | | | 274 74 |
| Grandigue | 1,047 91 | | | | 1,047 91 |
| Great Salmon river, breakwater | | | 147 75 | | 147 75 |
| Green Point (Beresford), breakwater | | 284 40 | | | 284 40 |
| Grimross Canal (Queens County) | 14,366 59 | | | | 14,366 59 |
| Harvey Bank, wharf | | 2,073 46 | | | 2,073 46 |
| Humphrey's (Queens County) | 2,801 86 | | | | 2,801 86 |
| Kouchibougouac, harbour works | | 1,998 53 | | | 1,998 53 |
| Leonardville, wharf (floating slip) | | 332 46 | | | 332 46 |
| Little Aldouane | 100 12 | | | | 100 12 |
| Little Black river, wharf | 6,224 04 | 1,649 16 | | | 7,873 20 |
| Little Dipper harbour, breakwater | | 8,765 79 | | | 8,765 79 |
| Loggieville, wharf | | | 42 35 | | 42 35 |
| Lord's Cove, wharf | | 665 31 | | | 665 31 |
| Lorneville, breakwater, wharf | | 642 45 | | | 642 45 |
| McDonald's Point (Queen's County) | 4,039 93 | | | | 4,039 93 |
| Main River wharf (Kent County) | | | 569 92 | | 569 92 |
| Maquapit Lake | 6,400 45 | | | | 6,400 45 |
| Martin's Head, breastwork | | 1,934 41 | | | 1,934 41 |
| Mill's Point, wharf | | 299 62 | | | 299 62 |
| Millerton, wharf | 249 01 | | | | 249 01 |
| Miramichi River—Northwest | 5,792 61 | | | | 5,792 61 |
| Miramichi River—Southwest | 2,237 24 | | | | 2,237 24 |
| Miscou, wharf | | 520 67 | | | 520 67 |
| Newcastle, new wharf | | 4 13 | | | 4 13 |
| Oak Point | 8,144 14 | | | | 8,144 14 |
| Petite Lameque, wharf | | 1,869 78 | | | 1,869 78 |
| Petit Rocher, breakwater | | | 250 75 | | 250 75 |
| Portage River, breakwater, etc | | 2,548 70 | | | 2,548 70 |
| Quaco, breakwater | | | 452 21 | | 452 21 |
| Quaco, wharf | | 3,150 00 | | | 3,150 00 |
| Rexton | 448 28 | | | | 448 28 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *New Brunswick*—Continued. | | | | | |
| Richibucto Beach, extension of breakwaters | | 23,934 67 | | | 23,934 67 |
| Richibucto Cape, breakwater | | 1,785 63 | | | 1,785 63 |
| Richibucto, wharf | | 1,178 96 | | | 1,178 96 |
| River Mills (Boar's Head) | 1,248 76 | | | | 1,248 76 |
| River St. Croix | 1,273 68 | | | | 1,273 68 |
| River St. John and tributaries— | | | | | |
| Baker Brook | $ 299 70 | | | | |
| Baker Lake | 98 03 | | | | |
| Bear Brook | 199 60 | | | | |
| Grand Falls | 200 00 | | | | |
| Grand River | 405 41 | | | | |
| Green River | 654 94 | | | | |
| Iroquois River | 510 34 | | | | |
| Muniac Rapids | 130 00 | | | | |
| Quisibus River | 100 80 | | | | |
| Red Rapids | 203 65 | | | | |
| Riley Brook | 422 63 | | | | |
| Rocky Brook | 99 39 | | | | |
| St. Francis Channel | 300 57 | | | | |
| Siegas River | 149 00 | | | | |
| Tobique River | 1,924 90 | | | | |
| Trout River | 397 39 | | | | |
| Generally | 1,101 73 | | | | |
| | | 7,197 48 | | | 7,197 48 |
| River St. John, wharfs in tidal waters— | | | | | |
| Bedford | $ 230 06 | | | | |
| Evandale | 4,376 00 | | | | |
| Fredericton | 3,362 75 | | | | |
| Hatfield's Point | 8,639 86 | | | | |
| Heustis Landing | 6,918 37 | | | | |
| McAllisters | 18 00 | | | | |
| Seeleys | 49 13 | | | | |
| White's Bluff | 9,289 00 | | | | |
| | | 33,083 17 | | | 33,083 17 |
| River St. Louis (Lower) | 1,005 42 | | | | 1,005 42 |
| St. Andrews, wharf | 998 14 | | 238 00 | | 1,236 14 |
| St. Charles (Kent Co.), slipways | | 65 00 | | | 65 00 |
| St. Charles (Kent Co.), berth for scows | 1,301 46 | 378 36 | | | 1,679 82 |
| St. George, wharf | 2,237 79 | | 1,190 17 | | 3,427 96 |
| St. John Harbour— | | | | | |
| Beacon Bar | 566,353 21 | | | | 566,353 21 |
| Channel | 69,092 63 | | | | 69,092 63 |
| Courtenay Bay | 767,648 26 | 285,839 81 | | | 1,053,488 07 |
| Foul Ground | 6,097 01 | | | | 6,097 01 |
| Germain St. Slip | | 681 83 | | | 681 83 |
| Navy Island Bar, Nelson Slip | 4,402 10 | | | | 4,402 10 |
| Negro Point, breakwater extension | | 2,371 06 | | | 2,371 06 |
| Partridge Island, quarantine station | | 125 12 | | | 125 12 |
| " water pipe line | | 6,386 87 | | | 6,386 87 |
| South Market, wharf | | 256 15 | | | 256 15 |
| Winter Port, berths | 26,461 97 | | | | 26,461 97 |
| St. John West, deep water wharfs, etc | | 454,751 38 | | | 454,751 38 |
| St. John West, filling | | 137,625 89 | | | 137,625 89 |
| St. John West, piers | | 709,474 80 | | | 709,474 80 |
| St. John West, shipping galleries | | 13,804 40 | | | 13,804 40 |
| St. John West, permanent sheds | | 6,666 69 | | | 6,666 69 |
| St. John West, temporary sheds | | 39,961 80 | | | 39,961 80 |
| St. Martin's (West Quaco) | | | 712 51 | | 712 51 |
| Sackville, (old) wharf | | 2,088 56 | | | 2,088 56 |
| Seal Cove, (Grand Manan), breakwater pier | | 23,440 75 | | | 23,440 75 |
| Shediac Island, wharf | | 3,491 83 | | | 3,491 83 |
| Shippigan, ferry landing | | 107 95 | | | 107 95 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *New Brunswick*—Continued. | | | | | |
| Shippigan Gully, breakwater | 5,416 30 | 4,514 91 | | | 9,931 21 |
| Shippigan, wharf | | | 1,693 98 | | 1,693 98 |
| Stonehaven, breakwater | | | 1,124 12 | | 1,124 12 |
| Stonehaven, (Chamberlain Landing) | | 454 91 | | | 454 91 |
| Starkey's, River St. John | 352 92 | | | | 352 92 |
| Tabucintac, wharf enlargement | | | 1,600 00 | | 1,600 00 |
| The Range (Queens County) | 525 90 | | | | 525 90 |
| Thomas Creek, protection work | | 470 31 | | | 470 31 |
| Tracadie, breakwater, etc | | 109 83 | | | 109 83 |
| Upper Derby, wharf | | 121 45 | | | 121 45 |
| Webster's, wharf | 1,949 91 | | | | 1,949 91 |
| Welsh's Cove (Mace's Bay), breakwater | | 13,315 49 | | | 13,315 49 |
| Welshpool (Campobello), wharf | | | 41 91 | | 41 91 |
| Westfield, high water wharf | | 476 24 | | | 476 24 |
| West Quaco (see St. Martin's.) | | | | | |
| White's Cove (Queen's County) | 681 72 | | | | 681 72 |
| Wilson's Beach (Campobello), wharf | | | 1,261 03 | | 1,261 03 |
| Woodbury's Cove, wharf | | 1,078 16 | | | 1,078 16 |
| Woodward's Cove, breakwater | | 12,291 00 | | | 12,291 00 |
| Young's Cove (Queen's County) | 481 21 | | | | 481 21 |
| Generally | 7,290 23 | | | 18,160 23 | 25,450 46 |
| Totals, New Brunswick | 1,754,524 75 | 1,841,617 99 | 21,999 94 | 18,160 23 | 3,636,302 91 |
| *Quebec.* | | | | | |
| Amherst wharf, Magdelen Islands | 20,191 63 | 9,810 18 | | | 30,001 81 |
| Anse à Beaufils Harbour, improvements | | 2,970 97 | | | 2,970 97 |
| Anse à Fougere, removal of boulders | | 40 23 | | | 40 23 |
| Anse à Gilles, wharf | | | 1,500 00 | | 1,500 00 |
| Anse à la Grosse Roche (see Grosse Roche) | | | | | |
| Anse à la Louise, removal of boulders | | 154 00 | | | 154 00 |
| Anse à l'Eau (see Tadousac) | | | | | |
| Anse à l'Islet, wharf | | 439 28 | | | 439 28 |
| Anse à Simon, wharf | | 103 40 | | | 103 40 |
| Anse aux Gascons, wharf extension, etc | | 5 10 | | | 5 10 |
| Anse aux Griffonds, training pier | | 842 61 | | | 842 61 |
| Anse à Valleau, removal of boulders | | 40 00 | | | 40 00 |
| Anse St. Jean, wharf | | 2,499 68 | 1,999 67 | | 4,499 35 |
| Aylmer (Lake Deschenes), wharf | 1,075 17 | | 10 00 | | 1,085 17 |
| Baie des Rochers, wharf | | | 639 18 | | 639 18 |
| Baie St. Paul (Cap aux Corbeau), wharf | | | 5,993 19 | | 5,993 19 |
| Barachois de Malbaie, harbour improvements | | 4,074 23 | | | 4,074 23 |
| Batiscan, wharf | 4,381 84 | 11,045 51 | | | 15,426 85 |
| Beauport, wharf | 6,856 02 | | | | 6,856 02 |
| Becancour, wharf | 3,421 80 | 98 08 | | | 3,519 88 |
| Beloeil (see River Richelieu) | | | | | |
| Beloeil Village, wharf | | 4,396 33 | | | 4,396 33 |
| Bergeronnes, wharf | 537 42 | 1,115 51 | | | 1,652 93 |
| Bersimis, wharf | | 1,933 79 | | | 1,933 79 |
| Berthier (en-bas), wharf | | | 1,499 65 | | 1,499 65 |
| Berthierville, wharf | 1,879 71 | | | | 1,879 71 |
| Berthierville, D'Autray | 396 81 | | | | 396 81 |
| Bic, wharf at Pointe à Coté | | | 109 98 | | 109 98 |
| Boucherville, protection works | | 1,280 25 | | | 1,280 25 |
| Breche à Manon, removal of boulders | | 39 87 | | | 39 87 |
| Bryant's Landing, extension of wharf | | 3,088 90 | | | 3,088 90 |
| Buckingham (River du Lièvre) | 1,006 90 | | 30 00 | | 1,036 90 |
| Cacouna, wharf | | 4,356 26 | | | 4,356 26 |
| Cacouna, east wharf | | 2,000 05 | | | 2,000 05 |
| Cannes de Roches, extension breakwater | | 2,032 38 | | | 2,032 38 |
| Cap à l'Aigle, wharf extension, etc | | 28,637 71 | | | 28,637 71 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Continued. | | | | | |
| Cap Chat, extension of training pier | | 237 90 | | | 237 90 |
| Cap de la Madeleine, wharf extension | | 27,313 49 | | | 27,313 49 |
| Cap St. Ignace, wharf | | | 143 00 | | 143 00 |
| Cap Sante, wharf | | | 906 28 | | 906 28 |
| Chambly | 2,030 57 | | | | 2,030 57 |
| Chambord, wharf | | | 550 00 | | 550 00 |
| Champlain, wharf | | | 1,034 44 | | 1,034 44 |
| Chandler, wharf | | 78 93 | | | 78 93 |
| Chateau Richer, extension of wharf | | 4,917 51 | | | 4,917 51 |
| Chicoutimi Basin, wharf | | 127 69 | | | 127 69 |
| Chicoutimi, wharf extension | 4,502 58 | 182 04 | 4,988 42 | 1,342 50 | 11,015 54 |
| Clarke City (Seven Islands), wharf | | 7,759 37 | | | 7,759 37 |
| Clorydormes, removal of boulders | | 49 92 | | | 49 92 |
| Contrecoeur, protection works | | 2,029 55 | | 19 56 | 2,049 11 |
| Coteau Landing, wharf | | 2,799 41 | | | 2,799 41 |
| Cote St. Catherine, wharf | | 2,185 77 | | | 2,185 77 |
| Cross Point, wharf enlargement | | 1,831 12 | | | 1,831 12 |
| Deschambault, wharf | | | 1,166 89 | | 1,166 89 |
| Desjardins, wharf | | | 1,000 09 | | 1,000 09 |
| Devine's Point, River du Lievre | 337 50 | | | | 337 50 |
| D'Israeli, head block | | | 501 51 | | 501 51 |
| Doucet's Landing | 1,167 39 | | | | 1,167 39 |
| Douglastown breakwater—wharf extension | | 3,871 78 | | | 3,871 78 |
| East Templeton, wharf | | | 5 25 | | 5 25 |
| Echafaud Basque, removal of boulders | | 499 70 | | | 499 70 |
| Escoumains, wharf | | | 1,666 24 | | 1,666 24 |
| Fabre, wharf | | | 99 98 | | 99 98 |
| Fassett ice breaker (Ottawa River) | | 206 50 | | | 206 50 |
| Father Point, wharf | | | 699 22 | | 699 22 |
| Ferme Neuve, Co. Pontiac, revetment wall | | 2,878 12 | | | 2,878 12 |
| Fort Coulonge, wharf | | 480 50 | | | 480 50 |
| Fort William, Co. Pontiac, wharf | | | 100 00 | | 100 00 |
| Fraserville (see R. du Loup en bas) | | | | | |
| Gaspe, deep-water wharf | | | 65 00 | | 65 00 |
| Georgeville, wharf extension | | 507 25 | | | 507 25 |
| Grandes et Petites Bergeronnes, removal of rocks | | 2,000 62 | | | 2,000 62 |
| Grand Entrée Breakwater (Magdalen Islands) | | 6,175 60 | | | 6,175 60 |
| Grand Mechins, wharf extension | | 26 25 | | | 26 25 |
| Grand'Mère, dam | | 53 30 | | | 53 30 |
| Grande Riviere de Gaspe, wharf | | 6,276 58 | | | 6,276 58 |
| Grenville | 364 83 | | | | 364 83 |
| Grindstone (Magdalen Islands) breakwater | | 1,540 39 | | | 1,540 39 |
| Grondines, wharf | | | 1,625 55 | | 1,625 55 |
| Grosse Isle (Magdalen Islands) breakwater | | 3,164 55 | | | 3,164 55 |
| Grosse Isle Quarantine Station, extension of wharves | | 11,593 62 | | | 11,593 62 |
| Grosse Roche, wharf extension | | 3,584 43 | | | 3,584 43 |
| Harrington Harbour, wharf extension | | 77 25 | | | 77 25 |
| Havre aux Maisons (Magdalen Islands) repairs to pier | | | 1,078 92 | | 1,078 92 |
| Honfleur Landing, pier | | 500 83 | | | 500 83 |
| Hospital Bay (Magdalen Island) breakwater | | 1,285 83 | | | 1,285 83 |
| Hudson, wharf | 319 48 | | | | 319 48 |
| Hull, wharf | | | 171 60 | 152 00 | 323 60 |
| Hunterstown (Maskinonge) protection works | | 470 60 | | | 470 60 |
| Ile aux Coudres, extension to wharf | 689 56 | 20,717 28 | | | 21,406 84 |
| Ile aux Coudres (old wharf) | | | 77 57 | | 77 57 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Continued. | | | | | |
| Ile aux Grues wharf (north side) | | | 2,498 71 | | 2,498 71 |
| Ile aux Grues wharf (south side) | | | 2,525 86 | | 2,525 86 |
| Ile Cadieux | 1,621 03 | | | | 1,621 03 |
| Ile Perrot South, wharf | | 4,876 01 | | | 4,876 01 |
| Ile Verte wharf | | | 3,498 30 | | 3,498 30 |
| Ile Verte wharf at Auguste Michaud's | | 499 98 | | | 499 98 |
| Ile Verte, N.D. des Sept Douleurs, wharf | | 1,994 07 | | | 1,994 07 |
| Knowlton Landing, wharf reconstruction | | 8,559 34 | | | 8,559 34 |
| Lachine, wharf | | 179 90 | | | 179 90 |
| Lake Kenomamishish, landing piers | | 1,537 06 | | | 1,537 06 |
| Lake St. John, survey for dam at Grande Decharge | | 2,862 74 | | | 2,862 74 |
| La Lancette, wharf | | 500 37 | | | 500 37 |
| Lanoraie, wharf extension | | 1,335 00 | | | 1,335 00 |
| Lanoraie, wharf reconstruction | | 2,972 00 | | | 2,972 00 |
| Laprairie, protection works | | 55,076 40 | | | 55,076 40 |
| Lauzon dry-dock (see Levis) | | | | | |
| Lavaltrie, wharf | | | 812 00 | 35 88 | 847 88 |
| Les Eboulements, wharf | | | 5,493 34 | | 5,493 34 |
| Les Ecureuils, wharf | | | 796 63 | | 796 63 |
| Levis, deep-water wharf, etc | | 42,298 58 | | | 42,298 58 |
| Levis, graving dock (Lorne Dock) | 741 60 | | | 17,711 85 | 18,453 45 |
| Levis, Lauzon graving dock (new) | | 296,206 34 | | | 296,206 34 |
| L'Islet wharf, addition | | 5,133 60 | 10,160 00 | | 15,293 60 |
| Long Rapids (River du Lievre) | 4,411 34 | | | | 4,411 34 |
| Longueil, wharf | 11,776 52 | | | | 11,776 52 |
| Lotbiniere, wharf | | | 36 33 | 24 75 | 61 08 |
| Magog, wharf | | | 999 94 | | 999 94 |
| Malbaie, pier | | 22,907 50 | | | 22,907 50 |
| Manche d'Epee, removal of boulders | | 48 20 | | | 48 20 |
| Maria, wharf | | | 11 05 | | 11 05 |
| Maskinongé | 965 94 | | | | 965 94 |
| Masson, wharf | | | 51 00 | | 51 00 |
| Matane, extension of wharf and breakwater | | 101 44 | | | 101 44 |
| Megantic, reconstruction of wharf | | 5,672 30 | | | 5,672 30 |
| Miguasha, wharf | | | 599 24 | | 599 24 |
| Mille Vaches, wharf extension | | 758 08 | | | 758 08 |
| Mission Point, Co. Bonaventure | 8,555 72 | | | | 8,555 72 |
| Mission Rapids (River du Liévre) | 1,782 42 | | | | 1,782 42 |
| Mistook, wharf | | | 1,656 16 | | 1,656 16 |
| Montmagny, extension and repairs to wharf | | 6,936 80 | 53 40 | | 6,990 20 |
| Montmagny, protection wall northeast side of basin | 1,419 43 | 4,508 14 | | | 5,927 57 |
| Montreal, dry dock (subsidy) | | | | 101,636 50 | 101,636 50 |
| Murray Bay, enlargement wharf | 2,679 55 | 38,265 94 | | | 40,945 49 |
| Natashquan, extension of wharf | | 2,272,25 | | | 2,272 25 |
| New Richmond, wharf | | | 157 80 | | 157 80 |
| Nicolet, construction of jetty on east side of river | | 4,115 17 | | | 4,115 17 |
| Nicolet, wharf | | 10,655 35 | 158 40 | | 10,813 75 |
| Nominingue, wharf | | 1,643 49 | | | 1,643 49 |
| Norway Bay, wharf (Ottawa River) | | | 60 75 | | 60 75 |
| Notre Dame de la Salette (see River du Lièvre) | | | | | |
| Notre Dame du Lac, new wharf | | 4,448 40 | | | 4,448 40 |
| Notre Dame du Lac, wharf repairs | | | 972 83 | | 972 83 |
| Papineauville | 978 21 | | 5 00 | | 983 21 |
| Paspebiac, wharf | | | 250 53 | | 250 53 |
| Perce, wharf | | 1,025 00 | | | 1,025 00 |
| Peribonka (see River Peribonka) | | | | | |
| Petit Debarquement, wharf | | 741 51 | | | 741 51 |
| Petite Rivière Est, breakwater | | 41 00 | | | 41 00 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Continued. | | | | | |
| Petit Saguenay, shed on wharf | | 828 73 | | | 828 73 |
| Petite Tourelle, removal of boulders | | 40 50 | | | 40 50 |
| Piché Point (see Point Piché) | | | | | |
| Pierreville Mills | 1,304 40 | | | | 1,304 40 |
| Pierreville wharf | | | 656 11 | | 656 11 |
| Pointe à Brousseau, pier | | 1,927 57 | | | 1,927 57 |
| Pointe à Elie breakwater (Magdalen Islands) | | 571 49 | | | 571 49 |
| Pointe à la Loupe (see St. Eloi) | | | | | |
| Pointe aux Esquimaux, wharf | | | 1,313 58 | | 1,313 58 |
| Pointe aux Trembles (Portneuf) wharf | | | 1,486 59 | | 1,486 59 |
| Pointe Claire, wharf | | | | 150 00 | 150 00 |
| Pointe Jaune, removal of boulders | | 39 92 | | | 39 92 |
| Pointe Madeleine | 1,043 50 | | | | 1,043 50 |
| Pointe Piché, wharf (Timiskaming) | | 1,501 23 | | | 1,501 23 |
| Port au Saumon | 1,218 66 | | | | 1,218 66 |
| Portneuf (Saguenay) wharf | | | 671 11 | | 671 11 |
| Poupore (Rivière Lièvre) training pier | | 15,361 51 | | | 15,361 51 |
| Quebec Harbour, improvements to navigation | 2,175 42 | 135,912 91 | | | 138,088 33 |
| Quyon, wharf | 1,976 77 | 8,026 78 | | | 10,003 55 |
| Repentigny, wharf | | | 15 50 | | 15 50 |
| Rigaud, wharf | | 2,451 07 | | | 2,451 07 |
| Rimouski Harbour, improvements | | 50,136 34 | | | 50,136 34 |
| Rimouski, wharf | | 3,559 53 | | 953 49 | 4,513 02 |
| Rivière aux Mulets (Argenteuil) improvements | | 1,194 31 | | | 1,194 31 |
| Rivière aux Renard wharf | | 7,092 03 | | | 7,092 03 |
| Rivière Batiscan, landing piers | | 596 54 | | | 596 54 |
| Rivière Blanche wharf (Co. Rimouski) | | 6,800 42 | | | 6,800 42 |
| Rivière Caribou wharf (Saguenay) | | 167 25 | | | 167 25 |
| Rivière Chateauguay, dams | | 2,257 81 | | | 2,257 81 |
| Rivière Claude, removal of boulders | | 39 93 | | | 39 93 |
| Rivière des Prairies, improvements to navigation (survey) | | 560 35 | | | 560 35 |
| Rivière des Prairies, Morrow & Beatty's claim | | 1,692 90 | | | 1,692 90 |
| Rivière des Vases, landing pier extension | | 1,499 87 | | | 1,499 87 |
| Rivière du Lièvre lock | | | | 3,731 95 | 3,731 95 |
| Rivière du Lièvre wharves— | | | | | |
| Brewer's float | | | 85 50 | | 85 50 |
| Buckingham (shed) | | | 17 79 | | 17 79 |
| Glen Almond float | | | 69 75 | | 69 75 |
| High Falls wharf | | 1,466 77 | | | 1,466 77 |
| Notre Dame de la Salette float | 246 34 | | 1,456 61 | | 1,702 95 |
| Notre Dame du Laus float | | 155 57 | | | 155 57 |
| Poltimore float | | | 23 00 | | 23 00 |
| Rivière du Loup, wharf improvements and repairs (Fraserville) | 2,706 93 | 1,355 42 | | | 4,062 35 |
| Rivière du Moulin, protection works | | 5,022 40 | | | 5,022 40 |
| Rivière du Sud, protection works | | 5,007 86 | | | 5,007 86 |
| Rivière Gatineau, bank protection | | 3,125 26 | | | 3,125 26 |
| Rivière la Loutre | 299 25 | | | | 299 25 |
| Rivière la Pipe, wharf | | | 1,794 30 | | 1,794 30 |
| Rivière Ouelle, wharf | | | 4,005 74 | | 4,005 74 |
| Rivière Peribonka, training dykes | | 993 59 | | | 993 59 |
| Rivière Richelieu at Beloeil | 216 28 | | 681 12 | 185 17 | 1,082 57 |
| Rivière Richelieu at St. Johns | | | 164 74 | 47 73 | 212 47 |
| Rivière Saguenay | 5,042 46 | | | | 5,042 46 |
| Rivière St. Maurice, Grande Piles to La Tuque | 1,088 31 | | | | 1,088 31 |
| Rivière St. Maurice, pontoons | | 223 39 | | | 223 39 |
| Rivière St. Maurice, shed on wharf | | 347 07 | | | 347 07 |
| Rivière Verte, West, wharf extension | | 1,862 53 | | | 1,862 53 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Continued. | | | | | |
| Roberval (Lake St. John), completion of breakwater | | 7,883 18 | | | 7,883 18 |
| Roberval (Lake St. John) wharf | 2,612 61 | 900 06 | | | 3,512 67 |
| Ruisseau à Loutre, wharf extension | | 4,953 09 | | | 4,953 09 |
| Ruisseau à Patate, removal of boulders | | 40 35 | | | 40 35 |
| Ruisseau à Sem, pier | | | 1,495 23 | | 1,495 23 |
| Ste. Adelaide de Pabos, breakwater | | 1,546 06 | | | 1,546 06 |
| St. Alexis, Ha' Ha' Bay | 1,118 02 | | 3,006 73 | | 4,124 75 |
| St. André de Kamouraska, wharf | | | 287 85 | | 287 85 |
| St. Andrews East | 2,835 14 | | | | 2,835 14 |
| St. Alphonse, addition to wharf | | 60 50 | | | 60 50 |
| St. Anicet, wharf | | | 305 74 | | 305 74 |
| Ste. Anne de Beaupré, wharf | | 27,113 85 | | | 27,113 85 |
| Ste. Anne de Bellevue, wharf | 4,132 88 | 4,305 13 | | | 8,438 01 |
| Ste. Anne de la Perade, protection work | | 4,280 01 | | | 4,280 01 |
| Ste. Anne du Saguenay, wharf | | 678 80 | 474 44 | | 1,153 24 |
| Ste. Anne des Monts, harbour improvements at mouth of Grande Rivière Ste. Anne | | 2,788 99 | | | 2,788 99 |
| Ste. Anne des Monts, landing pier | | 35,368 60 | | | 35,368 60 |
| St. Antoine de Richelieu, wharf and shed | 378 00 | 3,468 09 | | | 3,846 09 |
| St. Antoine Station, wharf | | 3,465 02 | | | 3,465 02 |
| Ste. Cecile du Bic, wharf | | 2,125 43 | | | 2,125 43 |
| St. Charles Borromée, removal of boulders | | 50 00 | | | 50 00 |
| St. Charles de Caplan, wharf | | | 100 09 | | 100 09 |
| Ste. Clothilde de Chateauguay (Grand Marsh), improvements | | 4,985 42 | | | 4,985 42 |
| Ste. Croix, wharf extension, etc | | 95 25 | | 10 00 | 105 25 |
| St. Denis Wharf (River Richelieu) | 2,785 78 | | | | 2,785 78 |
| St. Eloi (Pte à la Loupe), landing pier | 999 37 | | | | 999 37 |
| Ste. Emelie (Leclercville), wharf | | 2,244 36 | | | 2,244 36 |
| Ste. Famille Ile d'Orleans, wharf (old) | | | 1,486 32 | | 1,486 32 |
| St. Fidèle, wharf | | | 1,970 99 | | 1,970 99 |
| St. François Ile d'Orleans (North), wharf | | | 1,730 69 | | 1,730 69 |
| St. François Ile d'Orleans (South), wharf | | | 3,465 03 | | 3,465 03 |
| St. François du Lac, wharf | | | 85 00 | | 85 00 |
| St. Fulgence, wharf | | | 247 80 | | 247 80 |
| St. Gédéon, wharf | | 698 92 | 1,439 36 | | 2,138 28 |
| St. Genevieve de Batiscan, wharf | | 1,744 42 | 103 23 | | 1,847 65 |
| St. Georges de Malbaie, breakwater | | 3,401 25 | | | 3,401 25 |
| St. Germain de Kamouraska, wharf | | 31 00 | | | 31 00 |
| St. Godfroi, breakwater | | | 600 00 | | 600 00 |
| St. Gregoire de Montmorency, wharf | | 4,915 01 | | | 4,915 01 |
| St. Hilaire, protection wall | | 1,007 06 | | | 1,007 06 |
| St. Ignace de Loyola, wharf | | 1,500 35 | | | 1,500 35 |
| St. Irénée, les Bains wharf | | 3,490 75 | 3,588 56 | | 7,079 31 |
| St. Jean des Chaillons, wharf | | 2,796 43 | | | 2,796 43 |
| St. Jean des Piles | 4,434 45 | | | | 4,434 45 |
| St. Jean Ile d'Orleans, wharf extension and repairs | | 61 05 | 2,246 02 | | 2,307 07 |
| St. Jean Port Joli, wharf extension | | 8,894 95 | | | 8,894 95 |
| St. Jerome wharf, addition | 690 50 | 2,099 00 | | | 2,789 50 |
| St. Joseph de Sorel, wharf (shed) | | 1,056 83 | | | 1,056 83 |
| St. Justin, protection work | | 1,967 86 | | | 1,967 86 |
| St. Lambert, revetment wall | | | 306 15 | | 306 15 |
| St. Laurent Ile d'Orleans, wharf | | | 4,226 92 | 132 50 | 4,359 42 |
| St. Louis de Gonzague | 6,030 22 | | | | 6,030 22 |
| St. Majorique, wharf approach | | 7,544 36 | | | 7,544 36 |
| St. Marc, repairs to wharf and ice-breaker | | | 146 90 | | 146 90 |
| St. Mathias, wharf | | | 10 00 | | 10 00 |
| St. Mathieu (county Rimouski) | 1,762 33 | | | | 1,762 33 |
| St. Michel de Bellechasse, wharf | | | 1,997 97 | | 1,997 97 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec*—Concluded. | | | | | |
| St. Nicolas, wharf | | | 4,672 64 | | 4,672 64 |
| St. Roch des Aulnaies, wharf (additioa) | | 2,822 50 | | | 2,822 50 |
| St. Roch de Mukinac | 1,096 00 | | | | 1,096 00 |
| St. Romuald, removal of boulders | | 1,499 46 | | | 1,499 46 |
| St. Siméon, wharf | | | 1,388 61 | | 1,388 61 |
| St. Timothée, wharf | | 1,501 45 | | | 1,501 45 |
| St. Valier, extension to wharf | | 376 73 | | | 376 73 |
| Ste. Victoire, wharf (shed) | | 1,997 00 | | | 1,997 00 |
| St. Yvon (Gaspé), removal of boulders | | 50 05 | | | 50 05 |
| Sault au Mouton, removal of boulders | 450 00 | 764 20 | | | 1,214 20 |
| Senneville | 1,418 75 | | | | 1,418 75 |
| Sorel, deep water wharf | | | 565 69 | | 565 69 |
| Stratford Centre (Lake Aylmer), wharf | | | | 19 50 | 19 50 |
| Sturgeon Bay, near Chambly | 410 53 | | | | 410 53 |
| Soulanges Canal, repairs to shed | | | 10 45 | | 10 45 |
| Tadousac, Wharf at Anse à l'Eau | | | 1,478 08 | | 1,478 08 |
| Three Rivers, deep-water wharf | | 20,644 00 | | | 20,644 00 |
| Thurso wharf (Ottawa River) | | 11,699 76 | | | 11,699 76 |
| Trois Pistoles harbour, improvements | | 9,912 54 | | | 9,912 54 |
| Trois Pistoles, wharf extension | | 624 51 | | | 624 51 |
| Valleyfield, wharf extension and shed | 83 65 | | | | 83 65 |
| Vaudreuil | 1,426 22 | | | | 1,426 22 |
| Varennes, protection works | | 1,755 39 | | | 1,755 39 |
| Verchères, wharf | | | 31 00 | 73 51 | 104 51 |
| Verdun, wharf | 5,704 68 | | 75 00 | | 5,779 68 |
| Ville-Marie, wharf (Timiskaming) | 2,164 41 | 4,779 19 | 61 00 | | 7,004 60 |
| Yamachiche landing | | 87 67 | | | 87 67 |
| Yamaska lock and dam | | 4,698 51 | 17 14 | 1,666 99 | 6,382 64 |
| Generally | 161,567 57 | | | 45,505 86 | 207,073 43 |
| Totals, *Quebec* | 303,509 90 | 1,197,213 20 | 108,520 97 | 173,399 74 | 1,782,643 81 |
| *Ontario.* | | | | | |
| Ancona, wharf | | 37 50 | | | 37 50 |
| Armitage Landing wharf | | 9,722 06 | | | 9,722 06 |
| Arnprior, wharf | | 69 38 | | | 69 38 |
| Ash Rapids, removal of obstructions | | 3,267 06 | | | 3,267 06 |
| Bare Point (Port Arthur), breakwater | | 111,396 55 | | | 111,396 55 |
| Barry's Bay, wharf | | | 192 46 | | 192 46 |
| Bayfield, piers | | | 4,650 00 | | 4,650 00 |
| Baysville, wharf | | | 422 94 | | 422 94 |
| Beaumaris, wharf and warehouse | | 871 18 | | | 871 18 |
| Beaverton, harbour improvements | | 34,128 65 | | | 34,128 65 |
| Belle Ewart, wharf | | 1,076 00 | | | 1,076 00 |
| Belle River, sheet piling | | | 1,000 40 | | 1,000 40 |
| Belleville, harbour improvements | 2,579 10 | 47,635 38 | | | 50,214 48 |
| Bensford, wharf (county of Peterboro) | | 195 79 | | | 195 79 |
| Black River, removal of obstructions | | 100 00 | | | 100 00 |
| Blind River, dock | 1,157 49 | | | | 1,157 49 |
| Bobcaygeon, wharf | | 64 55 | | | 64 55 |
| Bowmanville, piers | 2,405 83 | | 1,447 99 | | 3,853 82 |
| Bracebridge, wharf extension and warehouse | | 3,873 80 | | | 3,873 80 |
| Bradford, wharf | | | 1,089 42 | | 1,089 42 |
| Brighton, wharf extension | | 356 52 | | | 356 52 |
| Brockville, shoals | 349 56 | | | | 349 56 |
| Brockville (Tunnel Bay dock) | | 5,782 05 | | | 5,782 05 |
| Bronte, wharf and shore protection | | 1,095 35 | | | 1,095 35 |
| Bruce Mines, wharf, etc | 7,086 04 | | 674 49 | | 7,760 53 |
| Burk's Falls, Magnetawan river | 3,249 49 | | 1,085 10 | | 4,334 59 |
| Burlington Channel, west part of South Pier, etc | | | 14,311 62 | 3,889 35 | 18,200 97 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Continued. | | | | | |
| Burlington, revetment wall, etc. | | 3,118 59 | | | 3,118 59 |
| Burnt Island, wharf | | 3,714 45 | | | 3,714 45 |
| Caesarea, wharf | | 3,212 91 | | | 3,212 91 |
| Callendar, wharf extension | | 4,865 82 | | | 4,865 82 |
| Cobourg harbour | 1,931 10 | | | | 1,931 10 |
| Cobourg, centre pier | | 28,458 82 | | | 28,458 82 |
| Cobourg, east pier | | 2,845 08 | | | 2,845 08 |
| Cobourg, (extension of west breakwater) | | 9,623 69 | | | 9,623 69 |
| Cockburn Island, wharf | | | 426 42 | | 426 42 |
| Coldwater | 450 37 | | | | 450 37 |
| Collingwood harbour | 4,971 25 | | | | 4,971 25 |
| Collingwood, graving dock No. 1 | | | | 15,000 00 | 15,000 00 |
| Collingwood, graving dock No. 2 | | | | 9,208 96 | 9,208 96 |
| Craigie Lee, wharf | | 2,026 60 | | | 2,026 60 |
| Cumberland, wharf | | | 38 00 | | 38 00 |
| Depot Harbour, wharf | | | 39 01 | | 39 01 |
| Doe Lake, wharf | | 1,785 37 | | | 1,785 37 |
| Dyer's Bay, wharf | | | 189 95 | | 189 95 |
| Elk Lake, wharf | | 300 00 | | | 300 00 |
| Fitzroy Harbour, wharf | 1,516 07 | 7,574 48 | | | 9,090 55 |
| Fort William, harbour improvements | 710,689 03 | 354,342 90 | | | 1,065,031 93 |
| Fort Frances, wharf | | 33 15 | | | 33 15 |
| French River, waterway improvements | | 68,354 43 | | | 68,354 43 |
| Gananoque, wharf | | 17,007 58 | | | 17,007 58 |
| Goat Island (Lake Huron) | 88,896 07 | | | | 88,896 07 |
| Goderich Harbour, improvements | 15,691 11 | | | | 15,691 11 |
| Goderich, tunnel through breakwater | | 1,994 93 | | | 1,994 93 |
| Goderich, northwest breakwater | | 65,144 92 | | | 65,144 92 |
| Goderich, southwest breakwater | | 5,166 77 | | | 5,166 77 |
| Goderich, repairs to piers | | | 3,514 28 | | 3,514 28 |
| Goderich, river breakwater (rip-rap) | | 12,983 10 | | | 12,983 10 |
| Gore's Landing, wharf | | | 150 91 | | 150 91 |
| Grand Bend, breakwater, etc | | | 4,495 48 | | 4,495 48 |
| Haileybury, harbour improvements | 2,548 52 | 8,080 66 | | | 10,629 18 |
| Hamilton, harbour improvements | 66,014 24 | 51,631 61 | | | 117,645 85 |
| Hawkestone, wharf | | | 3,523 95 | | 3,523 95 |
| Helen's Bay, wharf | | 197 65 | | | 197 65 |
| Hilton (Marksville), wharf | | | 466 16 | | 466 16 |
| Holland River, wharf (Simcoe) | | | 174 95 | | 174 95 |
| Honey harbour | 2,833 47 | | | | 2,833 47 |
| Huntsville, wharf | | | 235 65 | | 235 65 |
| Juniper Island (Stony Lake), wharf | | 1,362 69 | | | 1,362 69 |
| Kagawong, wharf | | 1,132 68 | | | 1,132 68 |
| Kawartha Park, wharf reconstruction | | 4 50 | | | 4 50 |
| Kenora, wharf | | 379 23 | | 50 00 | 429 23 |
| Kensington, wharf | | 399 81 | | | 399 81 |
| Killarney | 2,768 01 | | | | 2,768 01 |
| Kincardine, breakwater | | 141,220 25 | | | 141,220 25 |
| Kincardine, piers | | | 1,157 59 | | 1,157 59 |
| Kingston, harbour improvements | 15,895 44 | 88,297 81 | | | 104,193 25 |
| Kingston R.M.C., retaining wall | | 3,105 83 | | | 3,105 83 |
| Kingsville, piers | | | 3,498 88 | | 3,498 88 |
| Lake Nipissing, Shanty Lake,-Monetville | | 1,488 79 | | | 1,488 79 |
| Lansdowne, wharf extension | | 5 00 | | | 5 00 |
| Leamington, breakwater | | 41 76 | | | 41 76 |
| Leamington, wharf | | | 1,199 96 | | 1,199 96 |
| Leith, wharf reconstruction | | 60 05 | | | 60 05 |
| Lion's Head, wharf | | 1,000 00 | | | 1,000 00 |
| Long Lake and Driftwood Creek, improvements to navigation | | 3,841 99 | | | 3,841 99 |
| Lorrain, wharf | | | 349 09 | | 349 09 |
| Madawaska River, Barry's Bay to Combermere | 2,844 41 | | | | 2,844 41 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Continued. | | | | | |
| Maganatawan, wharf (warehouse) | | 542 73 | | | 542 73 |
| Maxwell's Island (Whelan shoals) | 200 00 | | | | 200 00 |
| Meaford, harbour improvements | 1,120 13 | 32,143 77 | | | 33,263 90 |
| Michipicoten, wharf (warehouse) | | 952 84 | | | 952 84 |
| Midland, wharf | | | 2,352 78 | | 3,352 78 |
| Minaki, wharf | | 124 42 | | | 124 42 |
| Moaetville, wharf | | 847 23 | | | 847 23 |
| Montreal River (Latchford dam) | | 17,881 92 | | | 17,881 92 |
| Muskoka Narrows | 1,559 25 | | | | 1,559 25 |
| Newcastle, eastern pier | 741 01 | | 479 74 | | 1,220 75 |
| New Liskeard, harbour improvements | | 6,433 27 | | | 6,433 27 |
| North Bay, breakwater | 1,681 00 | 6,319 25 | 154 00 | | 8,154 25 |
| Oakville, piers | | | 1,072 29 | | 1,072 29 |
| Orillia, wharf | | 295 55 | | | 295 55 |
| Oshawa, harbour improvements | | 3,604 84 | | | 3,604 84 |
| Owen Sound, harbour | 543 67 | | | | 543 67 |
| Owen Sound, revetment wall, West side | | 29,044 70 | | | 29,044 70 |
| Parry Sound, wharf | | 20,782 14 | | | 20,782 14 |
| Pelee Island, docks | | | 1,999 41 | | 1,999 41 |
| Pembroke, wharf | | 518 89 | 140 61 | | 659 50 |
| Peterboro, pavilion on wharf | | 706 46 | | | 706 46 |
| Peterboro, dry dock | | 224 68 | | | 224 68 |
| Picnic Islands, improvements (Georgian Bay) | 86,511 11 | | | | 86,511 11 |
| Picton, harbour | 1,767 34 | | | | 1,767 34 |
| Pike Creek, piers | | | 649 85 | | 649 85 |
| Point Edward | 4,139 87 | | | | 4,139 87 |
| Porcupine, wharf | | | 1,393 58 | | 1,393 58 |
| Port Arthur, harbour improvements | 58,187 77 | 262,596 07 | | | 320,783 84 |
| Port Arthur, dry dock | | | | 35,641 50 | 35,641 50 |
| Port Bruce, piers | 738 08 | | 992 20 | | 1,730 28 |
| Port Burwell, harbour improvements | 15,830 28 | | 3,993 97 | | 19,824 25 |
| Port Colborne, eastern breakwater | | | 24,311 76 | | 24,311 76 |
| Port Credit, harbour improvements | | 184 60 | | | 184 60 |
| Port Elgin, breakwater | | | 1,533 66 | | 1,533 66 |
| Port Hope, harbour improvements | 7,450 23 | | 3,083 98 | | 10,534 21 |
| Portland, wharf | | 3,978 65 | | | 3,978 65 |
| Port McNicol (see Victoria Harbour) | | | | | |
| Port Perry, wharf | | 3,999 01 | | | 3,999 01 |
| Port Rowan, pier | | | 400 00 | | 400 00 |
| Port Stanley, harbour improvements | 2,167 14 | 105,132 39 | | | 107,299 53 |
| Port Stanley harbour, claim of Messrs. Haney & Miller | | 61,128 00 | | | 61,128 00 |
| Port Sydney, wharf | | 2,175 86 | | | 2,175 86 |
| Providence Bay, wharf, warehouse | | 1,905 93 | | | 1,905 93 |
| Puce (Lake St. Clair), sheet piling | | | 79 90 | | 79 90 |
| Pumpkin Point, wharf | | 4,199 10 | | | 4,199 10 |
| Rainy River, maintenance of gauges | | | | 17,559 70 | 17,559 70 |
| Rainy River mouth | 36,708 90 | 12,074 99 | | | 48,783 89 |
| Rainy River (Manitou Rapids) | | | 486 56 | | 486 56 |
| Richard's Landing, wharf | | 25,070 83 | | | 25,070 83 |
| River St. Lawrence, between Kingston and Brockville | 1,303 17 | | | | 1,303 17 |
| River Thames, breaking ice-jams | | | | 1,518 55 | 1,518 55 |
| River Thames, removal of obstructions | | 3,197 65 | | | 3,197 65 |
| River Thames, protection work at Chatham | | 3,028 27 | 195 85 | | 3,224 12 |
| Robin's Landing, wharf | | | | 25 00 | 25 00 |
| Rockland (river Ottawa) | 610 28 | | | | 610 28 |
| Rondeau Harbour, piers, etc | | | 2,998 95 | | 2,998 95 |
| Rosseau, wharf extension | | 279 50 | | | 279 50 |
| St. John Creek, stop log dam | | 3,559 91 | | | 3,559 91 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ontario*—Continued. | | | | | |
| St. Joseph, (Lake Huron) wharf | | | 128 23 | | 128 23 |
| Sand Point, wharf | | 886 30 | | | 886 30 |
| Sarnia Bay, improvements | 4,465 47 | | | | 4,465 47 |
| Sarnia, wharf and shelter basin | | 11 52 | | | 11 52 |
| Sangeen river, piers | | | 4,936 56 | | 4,936 56 |
| Sault Ste. Marie, harbour improvements | 66,851 49 | 14,943 00 | | | 81,794 49 |
| Sault Ste. Marie, wharf improvements | | 19,829 04 | | | 19,829 04 |
| Severn river at Washago, dams | | 10,095 93 | | | 10,095 93 |
| Shanty Bay, wharf | | | 4,638 16 | | 4,638 16 |
| Silver Centre, wharf | | 249 32 | | | 249 32 |
| Southampton, breakwaters | | | 8,795 46 | | 8,795 46 |
| South Bay (Co. Prince Edward) | 1,482 30 | | | | 1,482 30 |
| South Baymouth, Manitoulin Island, wharf | | 58 06 | | | 58 06 |
| South Lancaster, wharf | | | 797 41 | | 797 41 |
| Sturgeon Falls, wharf extension | 2,692 46 | 2,843 53 | | | 5,535 99 |
| Summerstown, wharf | | | 800 27 | | 800 27 |
| Telegraph and Nigger Islands | 24,738 50 | | | | 24,738 50 |
| Thessalon, wharf | | | 4,999 83 | | 4,999 83 |
| Thorah Island (Lake Simcoe), piling | | 700 11 | | | 700 11 |
| Thornbury, harbour improvements | | 15,620 31 | 476 37 | | 16,096 68 |
| Tobermory, glance booms | | | 155 92 | 37 68 | 193 60 |
| Toronto, harbour improvements— | | | | | |
| Eastern entrance | | 229 20 | | | 229 20 |
| Eastern pier reconstruction | | 37,796 89 | | | 37,796 89 |
| Island shore protection | | 8,647 98 | | | 8,647 98 |
| New western entrance | | 2,180 96 | | | 2,180 96 |
| Sea wall | | 757,201 14 | | | 757,201 14 |
| Trent Bridge, wharf | | 1,669 08 | | | 1,669 08 |
| Trenton, harbour improvements | 74,128 19 | | | | 74,128 19 |
| Vail's Point, wharf | | 7,732 00 | | | 7,732 00 |
| Victoria Harbour (Port McNicol), wharf, etc | | 6,322 81 | | | 6,322 81 |
| Wellington, wharf and harbour improvements | 12,453 72 | 22,386 21 | | | 34,839 93 |
| Wendover, wharf | | 30 00 | | | 30 00 |
| Wheatley, pier | | | 4,700 00 | | 4,700 00 |
| Whitby, harbour improvements | | 13,508 10 | | | 13,508 10 |
| Wiarton, wharf | | | 102 00 | | 102 00 |
| Windsor, landing dock | | 26,199 24 | | 1,700 00 | 27,899 24 |
| Winnipeg river, improvements | 4,339 30 | | | | 4,339 30 |
| Generally | 111,842 12 | | | 24,677 02 | 136,519 14 |
| Totals, *Ontario* | 1,406,129 38 | 2,676,549 90 | 121,184 00 | 109,307 76 | 4,365,171 04 |
| *Manitoba.* | | | | | |
| Anderson creek | 592 64 | | | | 592 64 |
| Assiniboine river, improvements | | 14,309 74 | | | 14,309 74 |
| Black river | 1,042 41 | | | | 1,042 41 |
| Delta, protection works | | 270 88 | | | 270 88 |
| Gimli harbour, breakwater and wharf repairs | 297 57 | 5,584 93 | 9,278 23 | | 15,160 73 |
| Gull harbour, wharf extension | | 9,564 29 | | | 9,564 29 |
| Hnausa, wharf | | | 385 45 | | 385 45 |
| Killarney, diversion of Long Lake into Lake Killarney | | 2,997 83 | | | 2,997 83 |
| Le Pas, wharf | 6,846 67 | 1,254 16 | | | 8,100 83 |
| Lockport | 281 85 | | | | 281 85 |
| Mossy river | 471 22 | | | | 471 22 |
| Minette, wharf | | 2,990 94 | | | 2,990 94 |
| Oak Point | 1,479 67 | | | | 1,479 67 |
| Poplar Park | 486 58 | | | | 486 58 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Manitoba*—Concluded. | | | | | |
| Red river— | | | | | |
| New entrance channel | 6,116 46 | 30,008 33 | | | 36,124 79 |
| Repairing banks above St. Andrews | | | 10,178 11 | | 10,178 11 |
| St. Andrews Rapids, lock and dam | | | | 14,800 46 | 14,800 46 |
| St. Andrews, fishway | | 677 80 | | | 677 80 |
| Selkirk, harbour improvements | 13,375 31 | | | | 13,375 31 |
| Selkirk, marine railway | 3,328 10 | 79,764 10 | | 1,367 33 | 84,459 53 |
| Selkirk slough | 5,133 23 | 4,963 10 | | | 10,096 33 |
| Selkirk, wharf | | | 39 30 | | 39 30 |
| Snake Island | 617 56 | | | | 617 56 |
| Sugar Island | 814 86 | | | | 814 86 |
| Victoria Beach Bay, breakwater wharf | | 1,826 25 | | | 1,826 25 |
| Warren Landing | 824 37 | | | | 824 37 |
| Winnipeg harbour, wharf | 6,036 84 | 68,490 85 | | | 74,527 69 |
| Winnipegosis | 10,332 84 | | | | 10,332 84 |
| Generally | 2,069 41 | | | 5,651 83 | 7,721 24 |
| Totals, *Manitoba* | 60,147 59 | 222,703 20 | 19,881 09 | 21,819 62 | 324,551 50 |
| *Saskatchewan and Alberta.* | | | | | |
| Athabaska river, removal of boulders | | 673 95 | | | 673 95 |
| Edmonton, wharf | | 2,720 52 | | | 2,720 52 |
| Fort Qu'Appelle | 1,209 11 | | | | 1,209 11 |
| Last Mountain Lake (Craven dam) | 6,274 14 | | | | 6,274 14 |
| North and South Saskatchewan rivers, survey of rapids, etc | | 29,963 69 | | | 29,963 69 |
| Pigeon Lake dam | | 2,869 31 | | | 2,869 31 |
| Prince Albert, protection works | | 18,354 56 | | | 18,354 56 |
| Saskatchewan river, improvements | | 3,085 92 | | | 3,085 92 |
| Sturgeon river, improvements | | 4,875 36 | | | 4,875 36 |
| Generally | 7,425 98 | | | 3,571 64 | 10,997 62 |
| Totals, *Saskatchewan and Alberta* | 14,909 23 | 62,543 31 | | 3,571 64 | 81,024 18 |
| *British Columbia.* | | | | | |
| Ainsworth, wharf | | 10,616 38 | | | 10,616 38 |
| Alice Arm, landing float | | 213 69 | | | 213 69 |
| Barnston Landing, wharf | | | 315 70 | | 315 70 |
| Bear river (Bedwell sound) wharf | | 990 00 | | | 990 00 |
| Beaton, wharf | | | 391 41 | | 391 41 |
| Belmont, wharf | | 420 97 | | | 420 97 |
| Bindley's landing, wharf | | 3,994 36 | | | 3,994 36 |
| Bold Point, float | | 75 50 | | | 75 50 |
| Camp Island, float | | | 10 67 | | 10 67 |
| Canoe Creek (Fraser river), wharf | | 1,961 47 | | | 1,961 47 |
| Cascade Flume, float | | | 9 38 | | 9 38 |
| Chemainus, landing float | | 597 46 | | | 597 46 |
| Chemainus river, removal of logs | | 1,364 61 | | | 1,364 61 |
| Chiliwack, wharf | | 227 70 | 764 35 | | 992 05 |
| Church House, landing float | | 96 50 | | | 96 50 |
| Columbia and Kootenay river improvements— | | | | | |
| Above Golden | | 4,847 26 | | | 4,847 26 |
| At Revelstoke | | 5,314 93 | | | 5,314 93 |
| Below Revelstoke | | 2,449 37 | | | 2,449 37 |
| Columbia Narrows, investigation | | 7,051 05 | | | 7,051 05 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *British Columbia*—Continued. | | | | | |
| Columbia and Kootenay river wharves. | | | | | |
| Allandale | | 755 47 | | | 755 47 |
| Burton | | | 836 78 | | 836 78 |
| Deer Park | | 1,173 68 | | | 1,173 68 |
| Edgewood | | | 510 93 | | 510 93 |
| Hall's Landing | | 3,760 58 | | | 3,760 58 |
| Harrop | | | 434 13 | | 434 13 |
| Johnson's landing | | 2,089 35 | | | 2,089 35 |
| Nelson (shed) | | 692 63 | | | 692 63 |
| Proctor | | | 480 74 | | 480 74 |
| Queen's Bay | | 822 94 | | | 822 94 |
| Revelstoke | | 1,466 93 | | | 1,466 93 |
| Vevey | | 2,418 35 | | | 2,418 35 |
| Columbia river | 26,431 66 | | | | 26,431 66 |
| Courtenay river | 8,699 48 | | | | 8,699 48 |
| Cowan's Cove, wharf | | | 214 13 | | 214 13 |
| Crofton, wharf | | 807 26 | | | 807 26 |
| Comox, wharf | | | 5,980 00 | | 5,980 00 |
| East Robson, wharf | | 2,941 16 | | | 2,941 16 |
| Esquimalt, new dry dock | | 40,702 77 | | | 40,702 77 |
| Esquimalt, old dry dock | | | | 20,064 03 | 20,064 03 |
| Evans Bay, landing float | | 897 80 | | | 897 80 |
| Farrington, wharf | | 5,067 43 | | | 5,067 43 |
| Fraser and Thompson river wharves— | | | | | |
| Blind Bay | | 3,499 97 | | | 3,499 97 |
| Gleneden | | 5,535 45 | | | 5,535 45 |
| Green's landing | | 147 81 | | | 147 81 |
| Hammond | | | 315 75 | | 315 75 |
| Harris Road | | 1,234 92 | | | 1,234 92 |
| Kamloops | | | 108 48 | | 108 48 |
| Langley | | | 17 10 | | 17 10 |
| Magar's landing | | 1,962 07 | | | 1,962 07 |
| Marsh landing | | 2,077 15 | | | 2,077 15 |
| Mission | | 1,108 30 | | | 1,108 30 |
| Mount Lehman | | 535 10 | | | 535 10 |
| New Westminster | | | 18 25 | | 18 25 |
| Salmon Arm | | 1,930 76 | | | 1,930 76 |
| Sicamous | | | 135 00 | | 135 00 |
| Steamboat Bay | | 2,710 34 | | | 2,710 34 |
| Whonnock | | | 25 00 | | 25 00 |
| Fraser river improvements— | 114,466 86 | | | | 114,466 86 |
| Matsqui, protection of bank | | 1,759 93 | | | 1,759 93 |
| Nicomen Bar | | 1,487 60 | | | 1,487 60 |
| North Arm | 67,705 09 | 305,344 98 | | | 373,050 07 |
| Steveston Jetty | | 29,487 76 | 1,598 82 | | 31,086 58 |
| Wingdams | | | 14,192 51 | | 14,192 51 |
| Wingdam No. 3 (Woodwards slough) | | 6,264 96 | | | 6,264 96 |
| Launch and tide gauges | | | | 1,726 01 | 1,726 01 |
| Snagboat *Samson* | | 7,977 40 | | 20,260 31 | 28,237 71 |
| Tamboline Slough | 3,700 82 | | | | 3,700 82 |
| Fraser river (Upper) and tributaries, improvements— | | | | | |
| Fort George canyon | | 4,683 62 | | | 4,683 62 |
| Stuart and Taehi rivers | | 17,556 49 | | | 17,556 49 |
| Fraser (Kootenay lake), wharf | | 1,322 75 | | | 1,322 75 |
| Fulford harbour, landing float | | 2,115 63 | | | 2,115 63 |
| Ganges harbour, wharf | | 3,700 00 | | | 3,700 00 |
| Goose Bay landing, float | | 213 69 | | | 213 69 |
| Gower Point, wharf | | 167 88 | | | 167 88 |
| Grace harbour, wharf | | 4,300 05 | | | 4,300 05 |
| Granite bay, wharf | | 3,065 15 | | | 3,065 15 |
| Grantham's landing (Howe Sound), float | | 189 13 | | | 189 13 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *British Columbia*—Continued. | | | | | |
| Heriot Bay, wharf reconstruction | | 4,800 77 | | | 4,800 77 |
| Holberg (Vancouver Island), wharf | | | 169 20 | | 169 20 |
| Holleyburn (North Vancouver) wharf | 1,439 95 | | | | 1,439 95 |
| Jackson Bay, landing float | | 945 25 | | | 945 25 |
| Kamloops, revetment wall | | 34 40 | | | 34 40 |
| Kaslo, wharf | | 12,047 55 | | | 12,047 55 |
| Kincolith, landing float | | 249 54 | | | 249 54 |
| Kitemat, float | | 162 50 | | | 162 50 |
| Kootenay bay, wharf | | 182 40 | | | 182 40 |
| Kootenay lake, piling | 3,036 56 | 1,526 51 | | | 4,563 07 |
| Lockport, landing float | | 79 44 | | | 79 44 |
| Lund, wharf | | 4,869 17 | | | 4,869 17 |
| Malcolm Island, wharf and float | | 4,521 32 | | | 4,521 32 |
| Naas river | 5,333 23 | | | | 5,333 23 |
| Nanaimo harbour, improvements | 28,319 08 | 30,211 58 | | | 58,530 66 |
| Nanaimo, wharf approach | | 525 00 | | | 525 00 |
| Nakusp, wharf | | 5,270 96 | | | 5,270 96 |
| Needles, wharf | | 1,337 81 | | | 1,337 81 |
| New Massett (Comox), landing float | | 297 75 | | | 297 75 |
| Nootka island, wharf | | 4,687 17 | | | 4,687 17 |
| Okanagan lake | 9,212 54 | | | | 9,212 54 |
| Okanagan river, protection works | | 7,062 20 | | | 7,062 20 |
| Pender harbour, float | | 107 59 | | | 107 59 |
| Pitt lake, wharf | | 3,854 22 | | | 3,854 22 |
| Pitt river (Fraser river) | 95,835 64 | | | | 95,835 64 |
| Pitt river (Lower), extension of wharf | | 4,060 63 | | | 4,060 63 |
| Port Moody, wharf extension | | 2,317 05 | | | 2,317 05 |
| Powell River, improvements | 31,737 20 | 3,989 10 | | | 35,726 30 |
| Pritchard, wharf | | 4,894 58 | | | 4,894 58 |
| Queenston (Comox), landing float | | 249 16 | | | 249 16 |
| Quesnel, wharf | | 27 81 | | | 27 81 |
| Refuge bay, landing float | | 179 78 | | | 179 78 |
| Robert's creek, wharf | | 6,509 33 | | | 6,509 33 |
| Rocky Point, wharf | | 326 20 | | | 326 20 |
| Roy's Beach, wharf | | 3,185 83 | | | 3,185 83 |
| Roy, Loughboro Inlet, landing float | | 999 47 | | | 999 47 |
| Saanichton, wharf | | 2,768 54 | | | 2,768 54 |
| Safety Cove, wharf | | 4,300 43 | | | 4,300 43 |
| Sand Spit Point, landing float | | 79 44 | | | 79 44 |
| Savary Island, landing float | | 998 61 | | | 998 61 |
| Sayward, wharf (shed) | | 114 00 | | | 114 00 |
| Scarf, wharf | | 4,177 41 | | | 4,177 41 |
| Shuswap lake | 5,933 28 | | | | 5,933 28 |
| Skeena river | 11,850 23 | | | | 11,850 23 |
| Sooke harbour, landing float | | 408 66 | | | 408 66 |
| Sooke harbour, wharf | | | 2,085 10 | | 2,085 10 |
| Sorrento, wharf | | | 208 50 | | 208 50 |
| South Fort George, wharf | | 31 01 | | | 31 01 |
| South Gabriola Island, wharf | | 595 00 | | | 595 00 |
| Spiller river, wharf and float | | 248 63 | 999 28 | | 1,247 91 |
| Squamish, wharf | | | 5,200 17 | | 5,200 17 |
| Stewart (Portland canal) wharf | | | 2,238 76 | | 2,238 76 |
| Stickine river, improvements | | 8,870 32 | | | 8,870 32 |
| Summerland, wharf | | 12 80 | | | 12 80 |
| Surf Inlet, landing float | | 2,073 66 | | | 2,073 66 |
| Syringa Creek, wharf | | 1,468 68 | | | 1,468 68 |
| Thompson river, improvements | 3,013 16 | 651 40 | | | 3,664 56 |
| Tofina, wharf | | 1,289 45 | | | 1,289 45 |
| Uclulet, wharf | | | 12 54 | | 12 54 |
| Union Bay, wharf | 1,858 35 | 941 53 | | | 2,799 88 |
| Upper Duncan river, improvements | | 2,572 72 | | | 2,572 72 |
| Van Anda, wharf | | | 4,799 94 | | 4,799 94 |
| Vancouver harbour, improvements | 152,582 74 | 848,372 56 | | | 1,000,955 30 |
| Vancouver harbour, False creek | 151,362 16 | | | | 151,362 16 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| HARBOURS AND RIVERS. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| *British Columbia*—Concluded. | | | | | |
| Vargas Island, wharf | | 3,164 60 | | | 3,164 60 |
| Victoria harbour, improvements | 269,850 61 | 1,064,377 31 | 90 50 | | 1,334,318 42 |
| Whaletown, wharf | | 2,494 16 | | | 2,494 16 |
| White Rock, wharf | | 4,960 32 | | | 4,960 32 |
| William's Head, quarantine station | | 2,999 09 | | | 2,999 09 |
| Willow Point (Lake Kootenay), wharf (shed) | | 463 42 | | | 463 42 |
| Wolfsen's bay, float | | 21 96 | | | 21 96 |
| Yellow Point, wharf | | 3,498 98 | | | 3,498 98 |
| Generally | 16,075 40 | | | 16,360 36 | 32,435 76 |
| Totals, *British Columbia* | 1,008,444 04 | 2,585,128 15 | 42,698 22 | 58,410 71 | 3,694,681 12 |
| *Yukon Territory.* | | | | | |
| Yukon river, improvements to navigation | | 5,012 85 | | | 5,012 85 |
| Total, *Yukon Territory* | | 5,012 85 | | | 5,012 85 |
| *Generally.* | | | | | |
| General expenses of staff, etc. | 2,426 78 | | | 16,689 23 | 19,116 01 |
| Salaries of district engineers, assistants, etc | | | | 421,608 92 | 421,608 92 |
| Test borings for sundry projected works | | 13,111 40 | | | 13,111 40 |
| Totals, *Harbours and Rivers generally* | 2,426 78 | 13,111 40 | | 438,298 15 | 453,836 33 |
| DREDGING PLANT. | | | | | |
| Maritime Provinces | | 38,665 88 | | | 38,665 88 |
| Ontario and Quebec | | 73,848 05 | | | 73,848 05 |
| Manitoba, Saskatchewan and Alberta | | 24,376 11 | | | 24,376 11 |
| British Columbia | | 71,796 36 | | | 71,796 36 |
| Totals, *Dredging Plant* | | 208,686 40 | | | 208,686 40 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| SLIDES AND BOOMS. | $ cts. | $ cts. | $ cts. | $ cts. |
| River Saguenay | 5,920 81 | 318 89 | 8,949 82 | 15,189 52 |
| River St. Maurice | 226,167 10 | 147 40 | 39,852 03 | 266,166 53 |
| Ottawa District— | | | | |
| Black River | | 3,522 82 | | 3,522 82 |
| Coulonge River | | 2,838 38 | 782 09 | 3,620 47 |
| Dumoine River | | 30 90 | | 30 90 |
| Gatineau River | | 2,253 35 | | 2,253 35 |
| Madawaska River | | 4,602 70 | | 4,602 70 |
| Ottawa River | | 1,770 95 | 31,887 97 | 33,658 92 |
| Petuwawa River | | 2,934 91 | | 2,934 91 |
| Trent and Newcastle District | | | 184 33 | 184 33 |
| Collection of slide and boom dues | | | 1,454 25 | 1,454 25 |
| Totals, Slides and Booms | 232,087 91 | 18,420 30 | 83,110 49 | 333,618 70 |
| ROADS AND BRIDGES. | | | | |
| *Maritime Provinces.* | | | | |
| International Bridge between Clair, N.B., and Fort Kent, Me | 3,561 12 | | | 3,561 12 |
| Matapedia Road, improvements and repairs | 4,569 33 | 10 50 | | 4,579 83 |
| *Quebec and Ontario.* | | | | |
| Interprovincial Bridge, Hawkesbury | 1,103 74 | | | 1,103 74 |
| Des Joachims Bridge | 1,498 56 | | | 1,498 56 |
| North Timiskaming Bridge | 39,543 59 | | | 39,543 59 |
| Pond Creek Bridge (Wright) | | 26 46 | | 26 46 |
| Portage du Fort Bridge | | 504 44 | | 504 44 |
| Ottawa City Bridges and streets maiatained by Government | | 4,658 55 | | 4,658 55 |
| Connaught Place and Wellington Street | | | 10,166 16 | 10,166 16 |
| Connaught Roadway under bridge | 975 50 | | | 975 50 |
| Nepean Point, electric installation | 320 69 | | | 320 69 |
| Lighting all above | | | 1,923 07 | 1,923 07 |
| York Bridge (Grand River) | | 1,024 24 | | 1,024 24 |
| *Manitoba.* | | | | |
| Miniota Bridge | 3 38 | | | 3 38 |
| Shellmouth Bridge | | 840 50 | | 840 50 |
| *Saskatchewan and Alberta.* | | | | |
| Banff Bridge | | 4,459 28 | | 4,459 28 |
| Edmonton Bridge | | 975 68 | | 975 68 |
| Totals, Roads and Bridges | 51,575 91 | 12,499 65 | 12,089 23 | 76,164 79 |
| TELEGRAPH LINES. | | | | |
| *Newfoundland.* | | | | |
| Cape Ray (subsidy) | | | 250 00 | 250 00 |
| *Maritime Provinces.* | | | | |
| Bay of Fundy | 6,578 00 | | 1,989 90 | 8,567 90 |
| Cape Breton | 9,436 25 | | 26,189 64 | 35,625 89 |
| Escuminac | 76 35 | | 1,303 13 | 1,379 48 |
| Partridge Island cable | | 203 57 | | 203 57 |
| Prince Edward Island and Mainland | 46,700 00 | | 6,946 66 | 53,646 66 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| TELEGRAPH LINES. | $ cts. | $ cts. | $ cts. | $ cts. |
| *Quebec (Mainland).* | | | | |
| Father Point (subsidy) | | | 500 00 | 500 00 |
| North Shore, east of Bersimis | | | 25,979 18 | 25,979 18 |
| North Shore, west of Bersimis | | | 21,177 85 | 21,177 85 |
| Quebec County Line | 6,203 84 | | 2,347 39 | 8,551 23 |
| Timiskaming Line | | | 2,742 42 | 2,742 42 |
| *Quebec (Islands).* | | | | |
| Anticosti | | | 7,075 76 | 7,075 76 |
| Grosse Isle, Isle aux Coudres and Island of Orleans System | | | 8,520 40 | 8,520 40 |
| Magdalen Islands | | | 5,639 02 | 5,639 02 |
| St. Ignace de Loyola, Isle du Pads Phone Line | 220 67 | | | 220 67 |
| Cable ship *Tyrian* | | 14,859 19 | 47,955 23 | 62,814 42 |
| Maritime Provinces and Gulf generally, including cable in store ($5,064) | | | 6,395 73 | 6,395 73 |
| *Ontario.* | | | | |
| Cockburn-Manitoulin Islands cable | 1,526 04 | | | 1,526 04 |
| Pelee Island | | | 5,059 34 | 5,059 34 |
| *Saskatchewan and Alberta.* | | | | |
| Qu'Appelle, Edmonton, Athabasca and Moosejaw, Wood Mountain systems | 95,431 67 | | 89,934 40 | 185,366 07 |
| *British Columbia and Yukon.* | | | | |
| Ashcroft-Dawson | 22,286 55 | | 240,196 66 | 262,483 21 |
| Edgewood-Nakusp | | | 1,160 95 | 1,160 95 |
| Golden-Windermere | 18,996 67 | | 3,469 11 | 22,465 78 |
| Kootenay Landing-Pilot Bay-Balfour | 10,903 13 | | | 10,903 13 |
| Kootenay Line | 12,220 37 | | | 12,220 37 |
| Okanagan Valley system | 64,910 53 | | 28,726 32 | 93,636 85 |
| Vancouver Island, including Archipelago | 73,377 09 | | 74,573 90 | 147,950 99 |
| British Columbia lines generally | | | 2,210 58 | 2,210 58 |
| Williams Head Quarantine Station line | 2,047 99 | | | 2,047 99 |
| *Telegraph service, generally* | | | 7,268 65 | 7,268 65 |
| Totals, Telegraph Lines | 370,915 15 | 15,062 76 | 617,612 22 | 1,003,590 13 |
| MISCELLANEOUS. | | | | |
| Surveys— | | | | |
| Maritime Provinces | | | 31,349 66 | |
| Quebec | | | 43,975 68 | |
| Ontario | | | 42,904 78 | |
| Manitoba | | | 3,952 36 | |
| Saskatchewan and Alberta | | | 7,101 23 | |
| British Columbia | | | 12,837 36 | |
| Generally | | | 2,130 52 | 144,251 59 |
| Upper Ottawa storage dams— | | | | |
| Investigation | 4,488 34 | | | |
| Kippewa survey | 4,080 82 | | | |
| Madawaska survey | 9,313 12 | | | |
| Mattawa survey | 1,739 49 | | | |
| Astonabing survey | 3,590 54 | | | |
| Quinze dam | 100,703 33 | | | |
| Timiskaming dam | 81,061 36 | | | |
| Generally | 27,277 63 | | | 232,254 63 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|
| MISCELLANEOUS | $ cts. | $ cts. | $ cts. | $ cts. |
| Accounts Branch— | | | | |
| Salaries and travelling expenses of agents, clerks, etc., of outside service | | | 19,237 06 | 19,237 06 |
| Deep Waterways Commission | | | 26,025 12 | 26,025 12 |
| Dry docks generally, preparing plans, etc., regarding proposed docks | 9,991 63 | | | 9,991 63 |
| Georgian Bay ship canal, Royal Commission | | | 15,026 37 | 15,026 37 |
| International commission, River St. John, N.B | | | 1,061 59 | 1,061 59 |
| Investigation under Inquiries Act | | | 1,035 67 | 1,035 67 |
| Lake Winnipeg, inspection tug | 5,399 45 | | | 5,399 45 |
| Legal Services *re* cases before International Joint Commission | | | 600 00 | 600 00 |
| Operation and maintenance of inspection boats | | | 54,231 62 | 54,231 62 |
| River gaugings | | | 24,085 89 | 24,085 89 |
| River St. Lawrence and Great Lakes Waterways Commission | | | 2,546 04 | 2,546 04 |
| River St. Lawrence, metering | | | 23,759 17 | 23,759 17 |
| Monument to His Majesty the late King Edward VII. | 410 52 | | | 410 52 |
| Monument to the memory of the late Sir L. H. Lafontaine and late Hon. Robert Baldwin | 4,006 00 | | | 4,006 00 |
| Monument to Madeleine de Verchères | 1,834 00 | | | 1,834 00 |
| Gratuities to widows or other representatives of 34 deceased employees under Civil Service Amendment Act, Sec. 41 | | | 5,435 16 | 5,435 16 |
| Compassionate allowance to the widow of the late James Bradshaw | | | 150 00 | 150 00 |
| Totals, miscellaneous | 253,896 23 | | 317,445 28 | 571,341 51 |

PART II—STATEMENT A—EXPENDITURE—*Continued.*

| Name of Work. | Dredging. | Construction and Improvements. | Repairs. | Staff and Maintenance. | Total. |
|---|---|---|---|---|---|
| RECAPITULATION. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Totals, Public Buildings— | | | | | |
| Nova Scotia | | 187,164 76 | 26,807 14 | 68,183 00 | 282,154 90 |
| Prince Edward Island | | 27,297 79 | 2,906 49 | 12,316 85 | 42,521 13 |
| New Brunswick | | 351,306 43 | 12,094 26 | 54,062 43 | 417,463 12 |
| Quebec | | 2,204,686 72 | 60,760 48 | 326,244 20 | 2,591,691 40 |
| Ottawa buildings | | 1,824,323 73 | 352,967 83 | 722,455 80 | 2,899,747 36 |
| Ontario (excluding Ottawa) | | 2,035,937 04 | 53,513 44 | 243,071 22 | 2,332,521 70 |
| Manitoba | | 656,265 23 | 19,482 02 | 117,658 01 | 793,405 26 |
| Saskatchewan | | 226,638 18 | 18,528 75 | 80,518 64 | 325,685 57 |
| Alberta | | 641,481 40 | 17,677 49 | 102,976 97 | 762,135 86 |
| British Columbia | | 906,345 26 | 17,589 02 | 129,273 13 | 1,053,207 41 |
| Yukon Territory | | | | 62,771 17 | 62,771 17 |
| Public buildings generally | | 8,678 87 | | 76,661 08 | 85,339 95 |
| Totals, Harbours and Rivers— | | | | | |
| Nova Scotia | 223,982 32 | 499,209 31 | 67,933 03 | 11,115 29 | 802,239 95 |
| Prince Edward Island | 85,850 17 | 195,224 43 | 11,870 77 | 2,861 40 | 295,806 77 |
| New Brunswick | 1,754,524 75 | 1,841,617 99 | 21,999 94 | 18,160 23 | 3,636,302 91 |
| Quebec | 303,509 90 | 1,197,213 20 | 108,520 97 | 173,399 74 | 1,782,643 81 |
| Ontario | 1,458,129 38 | 2,676,549 90 | 121,184 00 | 109,307 76 | 4,365,171 04 |
| Manitoba | 60,147 59 | 222,703 20 | 19,881 09 | 21,819 62 | 324,551 50 |
| Saskatchewan and Alberta | 14,909 23 | 62,543 31 | | 3,571 64 | 81,024 18 |
| British Columbia | 1,008,444,04 | 2,585,128 15 | 42,698 22 | 58,410 71 | 3,694,681 12 |
| Yukon Territory | | 5,012 85 | | | 5,012 85 |
| Harbours and rivers generally | 2,426 78 | 13,111 40 | | 438,298 15 | 453,836 33 |
| Totals, dredging plant | | 208,686 40 | | | 208,686 40 |
| " Slides and booms | | 232,087 91 | 18,420 30 | 83,110 49 | 333,618 70 |
| " Roads and bridges | | 51,575 91 | 12,499 65 | 12,089 23 | 76,164 79 |
| " Telegraph lines | | 370,915 15 | 15,062 76 | 617,612 22 | 1,003,590 13 |
| " Miscellaneous | | 253,896 23 | | 317,445 28 | 571,341 51 |
| Grand totals of expenditure | 4,911,924 16 | 19,485,600 75 | 1,022,397 65 | 3,863,394 26 | 29,283,316 82 |

PART II—STATEMENT B—SHOWING the Cost of the following Service for each Public Building, etc., (the total for each Province being carried into Statement 'A').

| Name of Building. | Rents. | Salaries and Supplies for Care-takers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Nova Scotia.* | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Amherst post office, etc | | 502 74 | 354 03 | 1,601 16 | 16 00 | 2,473 93 |
| Annapolis post office, etc | | 430 56 | 299 48 | 147 00 | 40 00 | 197 04 |
| " Imm. office | 165 00 | | | | | 165 00 |
| Antigonish post office | | 459 71 | 154 98 | 538 66 | | 1,153 35 |
| Arichat post office | | 205 12 | 230 75 | 100 45 | | 536 32 |
| Baddeck post office | | 436 44 | 200 00 | 62 46 | | 698 90 |
| Bridgewater post office | | 461 11 | 213 66 | 283 23 | 33 25 | 991 25 |
| Canso post office | | 475 93 | 343 25 | 172 96 | 10 00 | 1,002 14 |
| Dartmouth post office | | 466 65 | 161 75 | 139 71 | 37 75 | 805 86 |
| Digby post office | | 557 05 | 328 50 | 588 70 | 64 00 | 1,538 25 |
| Gaspereau post office | | | 8 00 | | | 8 00 |
| Glace Bay post office | | 698 48 | 348 50 | 807 40 | 33 00 | 1,887 38 |
| Guysboro post office | | 261 80 | 310 75 | 297 50 | | 870 05 |
| Halifax archives office | 206 25 | 16 50 | | 13 80 | | 236 55 |
| " clerk of works, office Spring Garden road | 52 50 | | | | | 52 50 |
| " custom house, &c | 78 72 | 5,084 05 | 1,139 72 | 889 31 | 583 26 | 7,775 06 |
| " examining warehouse and Assist. Rec. General's office | 1,200 00 | 1,070 94 | 133 60 | 62 60 | 58 49 | 2,525 63 |
| " immigration building | | 1,064 88 | 1,376 56 | 939 45 | 627 20 | 4,008 09 |
| " immigration detention hosp. | | | 396 55 | 307 52 | 502 50 | 1,206 57 |
| " immigration detention, Cunard building | | | | 97 20 | | 97 20 |
| " Militia and Defence Dept., Dennis road | 3,890 00 | | | | | 3,890 00 |
| " post office | | 5,986 50 | 840 22 | 3,101 52 | 580 15 | 10,508 39 |
| Inverness post office | | 466 58 | 273 06 | 390 52 | 45 00 | 1,175 16 |
| Kentville experimental farm | | | 228 29 | 282 74 | | 511 03 |
| " postoffice | | 414 63 | 270 56 | 424 69 | 50 00 | 1,159 88 |
| Liverpool post office | | 420 61 | 205 45 | 189 24 | 13 50 | 828 80 |
| Lunenburg post office | | 502 93 | 298 90 | 494 00 | 59 00 | 1,354 83 |
| Nappan experimental farm | | | 56 81 | | | 56 81 |
| New Glasgow post office | | 469 80 | 298 23 | 537 00 | 100 00 | 1,405 03 |
| North Sydney engineer's office | 600 00 | | | | 18 00 | 618 00 |
| " immigration office | | | 87 50 | 22 06 | 14 59 | 124 15 |
| " post office | | 592 43 | 345 66 | 624 62 | 32 00 | 1,594 71 |
| Parrsboro post office | | 483 45 | 165 40 | 282 40 | 59 30 | 990 55 |
| Pictou custom house | | 324 35 | 325 15 | | | 649 50 |
| " post office | | 304 50 | 254 90 | 37 32 | | 596 72 |
| Shelburne post office | | 495 96 | 265 73 | 251 12 | | 1,012 81 |
| Springhill post office, etc | | 509 72 | 264 50 | 450 96 | 30 00 | 1,255 18 |
| " Mines post office | | 25 00 | | | | 25 00 |
| Sydney post office, etc | | 708 88 | 344 00 | 879 81 | 145 00 | 2,077 69 |
| " Mines post office | | 534 17 | 236 00 | 501 20 | 30 00 | 1,301 37 |
| Truro post office, etc | | 553 64 | 721 00 | 482 34 | 60 00 | 1,816 98 |
| Westville post office | | 418 26 | 199 91 | 279 94 | 21 00 | 919 11 |
| Weymouth post office | 100 00 | | | | | 100 00 |
| Windsor immigration building | 112 50 | | | | | 112 50 |
| Windsor post office | | 615 03 | 321 23 | 380 53 | 100 00 | 1,416 79 |
| Wolfville post office | | 540 66 | 255 50 | 89 95 | 34 00 | 920 11 |
| Yarmouth post office | | 496 61 | 398 85 | 1,019 97 | 90 00 | 2,005 43 |
| Total, Nova Scotia | 6,404 97 | 27,055 67 | 12,656 93 | 17,771 04 | 3,486 99 | 67,375 60 |

## PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Prince Edward Island.* | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Charlottetown custom house, etc | 94 00 | 617 60 | 291 39 | 26 40 | 34 00 | 1,063 39 |
| " post office, etc | 18 40 | 3,063 20 | 832 52 | 1,823 80 | 225 00 | 5,962 92 |
| " experimental farm | | | 201 95 | 115 34 | | 317 29 |
| " immigration office | 160 38 | | | | | 160 38 |
| Georgetown post office, etc | | 140 08 | 301 98 | 41 76 | | 483 82 |
| Montague post office | | 180 03 | 272 36 | 79 48 | | 531 87 |
| Souris post office | | 440 26 | 475 75 | 142 50 | | 1,058 51 |
| Summerside armoury | | | | | | |
| " post office | | 441 03 | 548 65 | 475 10 | 39 75 | 1,504 53 |
| " caretakers' quarters | 12 50 | | | | | 12 50 |
| Tignish post office | | 522 24 | 655 40 | 44 00 | | 1,221 64 |
| Total, P. E. Island | 285 28 | 5,404 44 | 3,580 00 | 2,748 38 | 298 75 | 12,316 85 |
| *New Brunswick.* | | | | | | |
| Bathurst post office, etc | | 465 39 | 321 05 | 679 06 | | 1,465 50 |
| Campbellton post office | | 554 70 | 464 47 | 755 80 | 65 00 | 1,839 97 |
| Chatham armoury | | | | | | |
| " post office, etc | 45 00 | 321 42 | 573 33 | 413 22 | 20 00 | 1,372 97 |
| Clair immigration office | 120 00 | | | | | 120 00 |
| Dalhousie post office, etc | | 410 16 | 266 14 | 130 51 | 32 50 | 839 31 |
| Edmunston immigration office | 110 00 | | | | | 110 00 |
| Fairville post office | | 471 22 | 262 25 | 175 27 | 18 00 | 926 74 |
| Fredericton Engineer's office | 436 00 | | | 23 64 | | 459 64 |
| " experimental farm | | | 326 33 | 14 80 | | 341 13 |
| " immigration office | 366 63 | | 109 20 | 21 76 | 25 50 | 523 09 |
| " post office | | 574 22 | 933 77 | 668 70 | 81 00 | 2,257 69 |
| Grand Falls post office | | 431 56 | 490 00 | 178 20 | 32 00 | 1,131 76 |
| Hampton post office | | 174 20 | 308 55 | 11 00 | | 493 75 |
| Hartland post office | | 520 57 | 13 50 | 68 32 | 30 00 | 632 39 |
| Hillsboro post office | | 413 76 | 108 30 | 111 90 | | 633 96 |
| Marysville post office, etc | | 158 95 | 288 70 | 53 05 | 78 00 | 578 70 |
| Milltown post office | | 119 24 | | | | 119 24 |
| Moncton post office, etc | | 501 46 | 587 81 | 679 19 | 134 00 | 1,902 46 |
| Newcastle post office, etc | | 576 90 | 436 38 | 684 80 | 35 00 | 1,733 08 |
| Osseekeag sub. post office | | 42 54 | | | | 42 54 |
| Richibucto post office | | 434 61 | 422 75 | 175 55 | | 1,032 91 |
| Sackville post office | | | | | | |
| Shediac custom house | | | | | | |
| Sussex post office | | 418 36 | 432 60 | 186 52 | 50 50 | 1,087 98 |
| St. John custom house | 260 25 | 3,798 66 | 2,200 91 | 931 83 | 1,639 32 | 8,830 97 |
| " detention hospital | | 730 00 | | | | 730 00 |
| " Engineer's office | 403 00 | | | | | 403 00 |
| " immigration building | 2,105 32 | 1,446 00 | 1,786 81 | 703 96 | 259 39 | 6,301 48 |
| " Marine and Fisheries | 900 00 | | | 5 51 | | 905 51 |
| St. John post office | | 3,080 20 | 976 79 | 2,707 81 | 1,245 74 | 8,010 54 |
| " quarantine station, Partridge Island | | 720 00 | | 16 28 | 366 72 | 1,103 00 |
| " Savings Bank | | 0 70 | 371 00 | 164 67 | 22 57 | 558 94 |
| " West post office | | 464 96 | 270 13 | 200 56 | 10 50 | 946 15 |
| St. Leonard immigration bureau | 28 00 | | | | | 28 00 |
| St. Stephen immigration bureau | 75 00 | | 28 00 | | 12 84 | 115 84 |
| " post office | 75 00 | 566 41 | 228 50 | 456 88 | 81 48 | 1,408 27 |
| " Bridge post office and custom house | | | | 17 40 | | 17 40 |
| Tracadie Lazaretto | | 806 45 | 2,423 51 | 60 05 | | 3,290 01 |
| Woodstock post office | | 538 20 | 720 00 | 427 30 | 34 00 | 1,719 50 |
| Total, New Brunswick | 4,924 20 | 18,740 84 | 15,350 78 | 10,723 54 | 4,274 06 | 54,013 42 |

## PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies, for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Quebec.* | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Acton Vale post office | | 511 97 | 200 86 | 182 54 | 24 00 | 919 37 |
| Arthabaska post office | 30 00 | 479 98 | 468 82 | 388 80 | 100 00 | 1,467 60 |
| Asbestos post office | 105 00 | | | | | 105 00 |
| Aylmer post office | | 132 41 | 306 25 | 265 33 | 39 00 | 742 99 |
| Beauharnois post office | 187 50 | 33 33 | | | | 220 83 |
| Berthierville post office | | 83 95 | 160 00 | 48 15 | 34 25 | 326 35 |
| Black Lake post office | 150 00 | | | | | 150 00 |
| Buckingham post office | | 220 02 | 250 00 | 135 75 | 27 90 | 633 67 |
| Cacouna post office | 37 50 | | | | | 37 50 |
| Cap Rouge experimental farm | | | 566 38 | | | 566 38 |
| Chicoutimi post office | | 631 36 | 387 65 | 722 11 | 300 00 | 2,041 12 |
| Coaticook, post office, etc. | | 560 22 | 339 83 | 268 32 | 50 00 | 1,218 37 |
| Cookshire post office | | 409 66 | 258 75 | 160 79 | 20 00 | 849 20 |
| Drummondville post office, etc. | | 377 53 | 289 48 | 122 75 | 25 00 | 814 76 |
| Dundee custom house | | | 99 50 | 127 71 | | 227 21 |
| Farnham (West) post office | | 310 75 | 116 00 | 128 79 | 20 00 | 575 54 |
| Fraserville post office, etc | | 419 99 | 280 30 | 166 70 | 150 00 | 1,016 99 |
| Granby post office, etc | | 370 79 | 247 50 | 175 25 | 150 00 | 943 54 |
| Hull post office | | 152 50 | 328 63 | 191 72 | 289 88 | 962 73 |
| Iberville post office | | 528 90 | 75 38 | 57 90 | 85 50 | 747 68 |
| Isle Verte engineer's office | 27 00 | | | | | 27 00 |
| Joliette custom-house (temp.) | 550 00 | 8 50 | | 13 84 | 14 13 | 586 47 |
| Joliette excise office (inland revenue building) | 194 00 | 8 50 | | 7 24 | 5 50 | 215 24 |
| Joliette post office | | 554 30 | 6 00 | 99 90 | 108 00 | 768 20 |
| Joliette post office, temp | 620 00 | 8 50 | 249 37 | 111 68 | 9 00 | 998 55 |
| Joliette post office inspector's office | 264 00 | | | 1 24 | 4 50 | 269 74 |
| Joliette weights and measures office | 242 00 | | | | | 242 00 |
| Knowlton post office and armoury | | 194 44 | 238 06 | 200 57 | 21 00 | 654 07 |
| Lachine post office | | 129 81 | 282 68 | 171 50 | 58 88 | 642 87 |
| Lachute post office | | 413 01 | 208 14 | 447 96 | 37 50 | 1,106 61 |
| Laprairie post office | | 158 32 | 179 30 | 35 01 | 45 00 | 417 63 |
| L'Assomption post office | | 341 51 | 201 72 | 118 63 | 65 00 | 726 86 |
| Leanoxville experimental farm | | | | 14 48 | | 14 48 |
| Levis post office, etc | | 571 07 | 585 50 | 394 46 | 250 00 | 1,801 03 |
| Longueuil post office | | 469 90 | 19 00 | 97 83 | 129 28 | 716 01 |
| Louiseville post office | | 155 89 | 232 50 | 0 50 | 10 00 | 398 89 |
| Magog post office | | 434 34 | 247 20 | 235 11 | 78 56 | 995 21 |
| Marieville post office | | 421 77 | 244 75 | 146 61 | 28 00 | 841 13 |
| Matane post office | | 109 79 | | | | 109 79 |
| Megantic post office | | 428 89 | 231 50 | 468 64 | 10 50 | 1,139 53 |
| Montmagny post office and engineers' office | 96 83 | 443 71 | 214 50 | 312 44 | 50 00 | 1,117 48 |
| Montreal archives office | 666 64 | | | 44 20 | | 710 84 |
| " ordnance stores | 2,750 00 | | | | | 2,750 00 |
| " customs, express and parcel office | 25,000 00 | 1,170 00 | | 530 60 | 426 80 | 27,127 40 |
| " custom-house | | 6,450 12 | 1,714 48 | 1,130 44 | 440 00 | 9,735 04 |
| " custom-house canal office | | | 17 28 | 47 32 | | 64 60 |
| " Dominion public buildings generally | | 2,378 99 | | | | 2,378 99 |
| " drill hall | | | | | | |
| " engineers' office, supervising | 790 37 | | | | | 790 37 |
| " examining warehouse | 35 00 | 13,492 91 | 2,014 02 | 2,926 56 | 1,095 32 | 19,563 81 |
| " examining warehouse (new) | | | 2,722 54 | | | 2,722 54 |
| " forestry products laboratory | | | 228 60 | 43 95 | | 272 55 |
| " immigration building, hospital and office (old) | 1,458 38 | | 1 27 | 130 11 | 178 33 | 1,768 09 |
| " immigration building, hospital and office (new) | | 18 75 | 2,097 21 | 748 65 | 510 39 | 3,375 00 |
| " Inland Revenue office | | 1,001 71 | 613 39 | 156 74 | 97 00 | 1,868 84 |
| " Marine and Public Works offices (Commissioners St.) | 2,387 50 | | | 3 60 | | 2,391 10 |
| " Marine and Public Works offices (Shaughnessy bdg.) | 12,159 61 | | | 6 26 | 53 16 | 12,219 03 |
| " Public Works office (Merchants Bank building.) | 212 68 | 1 05 | | | 10 41 | 224 14 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Quebec*—Continued. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Montreal post office (main) | 402 87 | 61,681 85 | 5,592 86 | 19,454 42 | 3,053 47 | 90,185 47 |
| " postal station "A" Carslake building | | 10 50 | | | | 10 50 |
| " postal station "B" (Ste. Catherine) | 375 00 | 2,231 53 | 654 59 | 1,168 80 | 388 00 | 4,817 92 |
| " postal station "B" (additional) 319 University street | 1,125 00 | | | 88 82 | 38 80 | 1,252 62 |
| " postal station "C" (Amherst | | 1,484 36 | 728 96 | 992 23 | 558 52 | 3,764 07 |
| " postal station "D" | | 819 36 | 716 18 | 344 17 | 93 12 | 1,972 83 |
| " postal station "N" | 1,800 00 | 57 68 | 290 31 | 314 04 | 27 16 | 2,489 19 |
| " postal station "E" | | 885 03 | 411 80 | 481 63 | | 1,778 46 |
| " postal station "M" or Maisoneuve post office | 350 00 | 91 48 | 91 38 | 22 60 | 14 50 | 569 96 |
| " postal station "F" (old) | 1,137 50 | | 609 03 | 8 66 | 17 85 | 1,773 04 |
| " postal station "F" (new) | | 12 25 | 397 99 | 49 16 | | 459 40 |
| " postal station "H" | 46 00 | 1,451 81 | 699 63 | 135 92 | 15 02 | 2,348 38 |
| " postal station "S" | | 43 50 | 240 28 | 141 05 | 33 40 | 458 23 |
| " postal station "L" (Westmount) | | 332 57 | 7 01 | 59 35 | | 398 93 |
| " Bonaventure postal station, G.T.R. station | | | | | | |
| " Hochelaga post office | | 251 67 | 220 88 | 331 25 | 104 76 | 908 56 |
| " public works workshop, Commissioners street | 23 00 | | | | | 23 00 |
| " St. Cunegonde post office | 1,750 00 | | | | | 1,750 00 |
| " St. Henri post office | | 404 98 | 181 58 | 306 94 | 43 54 | 937 04 |
| " Windsor postal station mail room | 213 00 | | | | | 213 00 |
| Nicolet post office | | 523 89 | 193 08 | 241 29 | 70 50 | 1,028 76 |
| Nominingue immigration building | 9 00 | 300 00 | 178 50 | 10 80 | | 498 30 |
| Peribonka immigration building | | 150 95 | 156 88 | 4 50 | | 312 33 |
| Pierreville post office | | 160 41 | 83 20 | 34 15 | 10 00 | 287 76 |
| Plessisville post office | | 132 20 | 144 00 | 255 82 | 27 95 | 559 97 |
| Quebec archives, office 23 St. Louis | 300 00 | 302 48 | 31 00 | 8 25 | | 641 73 |
| " Seeds Branch, agriculture, St. Anne Street | 75 00 | | | | | 75 00 |
| " citadel building, governor general's quarters | 34 54 | 661 37 | 830 05 | 505 37 | | 2,031 33 |
| " culler's office | | 540 00 | | | | 540 00 |
| " custom-house | 54 13 | 3,474 77 | 1,650 60 | 906 25 | 800 00 | 6,885 75 |
| " custom-house, temporary, Foley building | | | 15 25 | | 60 00 | 75 25 |
| " engineer's office, Merger building | 1,359 08 | | | | | 1,359 08 |
| " engineer's office, St. John street | 32 44 | | | | | 32 44 |
| " examining warehouse | | 1,621 40 | 1,308 70 | 789 52 | 900 00 | 4,619 62 |
| " immigration shed Louise Embankment | | | 2,221 35 | 4,674 82 | 1,007 05 | 7,903 23 |
| " immigration detention hospital | 600 00 | | 1,074 38 | 231 97 | 2,000 00 | 3,906 35 |
| " immigration office, temporary 103 Rue St. Jean | 450 00 | | | | | 450 00 |
| " marine school, 116 Mountain Hill | 325 00 | | | | 750 00 | 1,075 00 |
| " marine agency, Kings wharf | | | 445 99 | | | 445 99 |
| " observatory | | | | 93 96 | | 93 96 |
| " post office | 119 34 | 7,273 14 | 1,294 32 | 2,135 98 | 750 00 | 11,572 78 |
| " post office case examiner's office, Foley building | 120 00 | | 48 77 | 3 57 | | 172 34 |
| " post office case examiner's office, No. 2 Couillard | 60 00 | | | | | 60 00 |
| " postal station "B", St. Peters street | 3,000 00 | 12 25 | | 96 79 | 3,000 00 | 3,109 04 |
| " public buildings generally | | 4,684 85 | | 695 84 | | 4,684 85 |
| weight and measures | 615 00 | 3 00 | 90 52 | 15 61 | 615 00 | 724 13 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting | Water. | Total. |
|---|---|---|---|---|---|---|
| *Quebec*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Quebec, St. Roch postal station | | 896 12 | 392 54 | 425 70 | 400 00 | 2,114 36 |
| " St. Sauveur post office | 465 00 | 350 72 | 351 00 | 81 33 | 193 75 | 1,441 80 |
| " St. Sauveur temporary post office | 125 00 | | | | | 125 00 |
| Richmond post office, etc | | 533 52 | 302 11 | 340 99 | 25 00 | 1,201 62 |
| Rigaud post office, etc | | 300 00 | 359 85 | 284 97 | 11 00 | 955 82 |
| Rimouski, post office, etc | | 338 51 | 253 84 | 319 32 | 75 00 | 986 67 |
| Roberval immigration shed | | 186 00 | 25 00 | 3 00 | | 214 00 |
| Roberval post office etc | | 512 11 | 448 50 | 446 93 | 12 50 | 1,420 04 |
| Rock Island post office, etc | | 509 91 | 311 56 | 284 31 | 28 50 | 1,134 28 |
| Shawinigan Falls, post office | | 426 84 | 412 25 | 156 47 | 26 60 | 1,022 16 |
| Sherbrooke engineer's office | 1,467 00 | | | | | 1,467 00 |
| Sherbrooke post office etc | | 717 72 | 534 34 | 640 02 | 47 50 | 1,939 58 |
| Sherbrooke post office inspector's office | 747 00 | 3 00 | | 17 68 | | 767 68 |
| Sorel post office, etc | | 615 90 | 648 08 | 516 52 | 256 80 | 2,037 30 |
| Ste. Anne de Bellevue post office | 200 00 | | | 8 40 | 33 25 | 241 65 |
| Ste. Anne de la Pocatière experimental farm | | | 41 75 | | | 41 75 |
| St. Eustache post office, etc | 420 00 | | | 63 86 | | 483 86 |
| St. Felix de Valois post office | 62 00 | | | | | 62 00 |
| St. George's, East Beauce, post office | 200 00 | | | | | 200 00 |
| St. Gabriel de Brandon post office | 216 67 | | 318 00 | 56 00 | | 590 67 |
| St. Hyacinthe custom house and post office | | 636 48 | 230 04 | 482 36 | 150 00 | 1,498 88 |
| " inland revenue office | | 403 96 | 173 02 | 68 46 | 100 00 | 745 44 |
| St. Jean de Matha post office | 37 50 | | | | | 37 50 |
| St. Jerome post office, etc | | 424 71 | 338 74 | 182 47 | 64 59 | 1,010 51 |
| St. Johns custom house | | 376 87 | 98 91 | 72 99 | 60 00 | 608 77 |
| " post office | | 325 07 | 247 54 | 341 99 | 50 00 | 964 60 |
| St. Lambert post office | | 720 79 | 324 25 | 231 27 | | 1,276 31 |
| St. Laurent post office | | 512 67 | 232 06 | 18 33 | | 763 06 |
| St. Regis custom house and Indian office | | | 57 75 | | | 57 75 |
| St. Rose post office | 162 00 | | | | | 162 00 |
| St. Therese post office | | | 217 55 | | | 217 55 |
| Terrebonne post office, etc | | 333 30 | 206 39 | 95 81 | 15 00 | 650 50 |
| Thetford Mines post office, etc | | 189 92 | 300 50 | 276 45 | 100 00 | 866 87 |
| Three Rivers post office | 315 00 | 976 71 | 257 09 | 469 08 | 50 38 | 2,068 26 |
| " examining warehouse | | | | | 5 70 | 5 70 |
| Trois Pistoles post office | 75 00 | | | | | 75 00 |
| Valleyfield post office, etc | | 547 25 | 523 49 | 301 97 | 90 00 | 1,462 71 |
| Victoriaville post office, etc | 2 00 | 358 70 | 287 30 | 456 07 | 25 00 | 1,129 07 |
| Quebec, Dominion buildings generally | | | | 695 84 | | 695 84 |
| Total, Quebec | 66,811 08 | 135,385 20 | 45,650 37 | 52,811 46 | 17,636 00 | 318,294 11 |
| *Ottawa Buildings.* | | | | | | |
| Archives building | | 1,440 00 | 1,009 60 | 451 93 | | 2,901 53 |
| Astronomical observatory | | | 1,144 50 | 773 08 | | 1,917 58 |
| Biological laboratory | | | 150 00 | | | 150 00 |
| Experimental farm | | | 4,105 48 | 1,019 65 | | 5,125 13 |
| Fisheries museum | | | 320 50 | 358 77 | | 679 27 |
| Fuel testing building (Mines) | | | 742 66 | 399 03 | | 1,141 69 |
| Government grounds (green houses) | | 720 00 | 913 50 | 518 54 | | 2,152 04 |
| Mines building (Sussex St.) | | 2,640 00 | 2,752 08 | 790 75 | | 6,182 83 |
| Naval Service building (Sussex St.) | | 1,080 00 | 412 50 | | | 1,492 50 |
| Parliament and departmental buildings | | 63,224 05 | 47,374 03 | 21,316 65 | | 131,914 73 |
| Post Office | | 3,480 00 | 2,420 09 | 1,131 37 | | 7,031 46 |
| Printing Bureau | | | 11,710 61 | 3,392 95 | | 15,103 56 |
| Public Works (workshop) | | 1,200 00 | 1,452 74 | 328 56 | | 2,981 30 |
| Royal Mint | | 720 00 | 3,386 81 | 255 48 | | 4,362 29 |
| Supreme Court | | 1,560 00 | 1,192 36 | 511 89 | | 3,264 25 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Ottawa Buildings*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Victoria Island shipyard | | | | 318 50 | | 318 50 |
| Victoria Memorial Museum | | 7,560 00 | 8,193 31 | 3,235 48 | | 18,988 79 |
| Sundry buildings—occupied as minor departmental offices:— | | | | | | |
| Wellington St.—Vittoria St. district | | 360 00 | 3,336 90 | 1,122 61 | | 4,819 51 |
| Sparks St. (Egan block) | | | 547 50 | 45 59 | | 593 09 |
| Sundry rented buildings | 338,639 46 | 16,200 00 | 9,265 96 | 22,163 37 | | 386,268 79 |
| Total, Ottawa | 338,639 46 | 100,184 05 | 100,431 13 | 58,134 20 | | 597,388 84 |
| *Ontario* (excluding Ottawa). | | | | | | |
| Acton post office, etc | | 239 95 | 245 87 | 46 00 | | 531 82 |
| Alexandria post office, etc | | 499 92 | 266 40 | 222 65 | 7 50 | 996 47 |
| Almonte post office, etc | | 484 76 | 260 90 | 90 86 | 75 00 | 911 52 |
| Amherstburg post office, etc | | 410 21 | 208 30 | 235 44 | 35 00 | 888 95 |
| Arnprior post office, etc | | 466 11 | 332 90 | 881 63 | 32 00 | 1,712 64 |
| Athens post office, etc | | 33 33 | 299 30 | 237 10 | | 569 73 |
| Aylmer post office, etc | | 320 80 | 234 50 | 114 38 | 9 57 | 679 25 |
| Barrie post office, etc | | 455 90 | 353 97 | 361 37 | 50 00 | 1,221 24 |
| Belleville post office, etc | | 766 92 | 510 39 | 1,007 10 | 83 25 | 2,367 66 |
| Berlin G. T. railway station post office | 50 00 | | | | | 50 00 |
| " post office | | 553 66 | 310 53 | 200 43 | 20 36 | 1,084 98 |
| Blenheim post office | 200 00 | | | | | 200 00 |
| Bowmanville post office, etc | | 473 65 | 207 00 | 253 24 | 10 00 | 943 89 |
| Bracebridge post office, etc | | 110 45 | 294 16 | 13 60 | 0 83 | 419 04 |
| Brampton post office, etc | | 477 41 | 353 75 | 281 85 | 71 24 | 1,184 25 |
| Brantford post office, etc | | 607 20 | 964 51 | 322 90 | 56 88 | 1,951 49 |
| " public building (new) | | 674 03 | 443 11 | 2 16 | 26 67 | 1,145 97 |
| Bridgeburg post office, etc | | 375 59 | 202 00 | 160 32 | 20 00 | 757 91 |
| Brockville post office, etc | | 788 96 | 535 10 | 1,033 81 | 155 80 | 2,533 67 |
| Carleton Place post office, etc | | 408 86 | 221 25 | 319 46 | | 949 57 |
| Cayuga post office | | 319 05 | 66 61 | 75 14 | 6 50 | 467 30 |
| Chatham post office, etc | | 659 88 | 318 53 | 280 54 | 24 51 | 1,283 46 |
| Chesley post office | | 333 87 | 165 62 | 194 55 | 11 00 | 705 04 |
| Clinton post office | | 202 97 | 201 48 | 250 46 | 7 15 | 662 06 |
| Cobalt post office | 2,000 00 | | | | | 2,000 00 |
| Cobourg immigration office | 212 50 | | | 14 00 | | 226 50 |
| " post office, etc | | 697 03 | 315 17 | 696 70 | 65 07 | 1,773 97 |
| Cornwall post office, etc | | 546 10 | 697 05 | 508 95 | 112 50 | 1,864 60 |
| Deseronto post office | | 595 37 | 337 50 | 371 97 | 39 00 | 1,343 84 |
| Dresden post office | | 443 84 | 222 56 | 239 37 | 36 50 | 942 27 |
| Dundas post office | | 555 73 | 362 87 | 311 66 | 47 10 | 1,277 36 |
| Eganville post office, etc | | | 330 64 | | | 330 64 |
| Elora post office | | 486 31 | 254 80 | 312 79 | | 1,053 90 |
| Essex post office | | 418 81 | 139 46 | 201 41 | 37 50 | 797 18 |
| Exeter post office, etc | | | | | 4 50 | 4 50 |
| Fergus post office | | 451 63 | 276 30 | 344 01 | | 1,071 94 |
| Fort William engineer's office | 900 00 | | | | | 900 00 |
| " immigration shed | 156 60 | | | 9 69 | | 166 29 |
| " inland revenue office | 214 00 | | | | | 214 00 |
| " post office | 34 80 | 640 96 | 482 50 | 355 09 | 90 00 | 1,603 35 |
| Galt post office, etc | | 503 28 | 319 35 | 229 96 | 61 56 | 1,114 15 |
| Gananoque custom-house | | | 10 00 | 56 47 | 12 65 | 79 12 |
| " old post office | | 345 47 | 470 00 | 267 52 | 26 34 | 1,109 33 |
| " new post office | | 66 66 | | | 5 40 | 72 06 |
| Glencoe post office | | 424 29 | 217 59 | 436 74 | 1 00 | 1,079 62 |
| Goderich post office, etc | | 464 22 | 22 50 | 220 70 | 120 00 | 827 42 |
| Grimsby post office, etc | | 112 33 | 280 39 | 20 31 | | 413 03 |
| Guelph post office, etc | | 601 36 | 600 62 | 297 67 | 61 07 | 1,560 72 |
| Hamilton gas inspection office | | | | 4 50 | | 4 50 |
| " immigration building and office | 20 00 | | | 9 00 | | 29 00 |
| " inland revenue | | | | 58 26 | 23 60 | 81 86 |

## Part II—Statement B—Expenditure—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Ontario*—Continued. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Hamilton post office and examining warehouse | | 7,280 97 | 1,418 80 | 2,218 23 | 1,000 00 | 11,918 00 |
| " postal station "B" | 900 00 | | | 63 85 | 16 04 | 979 89 |
| Harriston post office | | 460 00 | 193 28 | 373 54 | 35 50 | 1,062 32 |
| Hawkesbury post office | | 428 67 | 267 20 | 246 37 | 20 88 | 963 12 |
| Ingersoll post office, etc | | 616 17 | 290 46 | 210 25 | 22 98 | 1,139 78 |
| " post office, temporary | 825 00 | 3 85 | 1 54 | 11 45 | | 841 84 |
| Kenora post office, etc | | 403 48 | 874 89 | 499 46 | 70 76 | 1,848 59 |
| Kincardine post office | | 263 87 | 367 10 | 611 50 | 20 00 | 1,262 47 |
| Kingston custom-house | | 674 60 | 462 70 | 156 80 | 59 15 | 1,353 25 |
| " inland revenue office | 2,261 39 | 618 30 | 532 90 | 140 00 | 71 88 | 3,624 47 |
| " ordnance stores | 1,000 00 | | | | | 1,000 00 |
| " post office | | 889 97 | 997 06 | 1,702 85 | 59 41 | 3,649 29 |
| Lansdowne post office | 50 00 | | | | | 50 00 |
| Leamington post office, etc | | 432 90 | 206 50 | 289 44 | 21 00 | 949 84 |
| Lindsay post office, etc | | 468 65 | 404 90 | 175 74 | 31 25 | 1,080 54 |
| Listowell post office | | 400 25 | 380 90 | 828 01 | 109 45 | 1,718 61 |
| London, Coote building, immigration office | 100 00 | | | | | 100 00 |
| " custom-house, etc | | 1,309 71 | 911 36 | 837 47 | 112 85 | 3,171 39 |
| " post office | | 1,531 51 | 1,193 13 | 2,225 07 | 60 00 | 5,009 71 |
| " addition, Carling building, examining warehouse, parcel post | | 436 66 | 179 55 | 13 43 | 49 07 | 678 71 |
| L'Orignal post office | 93 75 | | | | | 93 75 |
| Markham post office | | 572 76 | 94 68 | 85 20 | 1 00 | 753 64 |
| Merrickville post office | 150 00 | | | | | 150 00 |
| Midland examining office | 220 75 | | | | | 220 75 |
| " post office, etc | | 263 59 | 446 93 | 94 86 | 10 40 | 815 78 |
| Mildmay post office, etc | | 32 75 | 44 79 | 4 00 | | 81 54 |
| Mitchell post office | | 439 73 | 234 90 | 126 48 | 91 00 | 892 11 |
| Mount Forest post office | | 409 30 | 182 58 | 238 30 | 13 00 | 843 18 |
| Napanee post office, etc | | 540 22 | 374 73 | 444 42 | 69 44 | 1,428 81 |
| Niagara Falls post office | | 636 84 | 445 55 | 251 57 | 54 98 | 1,388 94 |
| North Bay post office, etc | | 780 05 | 621 45 | 334 72 | 36 00 | 1,772 22 |
| Orangeville post office, etc | | 602 59 | 212 39 | 293 50 | 20 00 | 1,128 48 |
| Orillia caretakers' quarters, temp | 70 00 | | | 18 17 | | 88 17 |
| " custom-house, temporary | 420 00 | | | 28 11 | 2 00 | 450 11 |
| " post office | 30 00 | 450 97 | 111 64 | 74 35 | 13 95 | 680 91 |
| " post office, temporary | 748 27 | 21 42 | 324 25 | 56 02 | | 1,149 96 |
| Oshawa post office | | 505 24 | 278 96 | 340 03 | 25 73 | 1,149 96 |
| Owen Sound post office, etc | | 530 40 | 573 90 | 217 13 | 57 00 | 1,378 43 |
| Paris post office | | 518 11 | 483 37 | 185 66 | 53 60 | 1,240 74 |
| Park Hill post office | | 191 60 | 221 90 | 47 97 | 5 94 | 467 41 |
| Pembroke post office, etc | | 460 36 | 584 76 | 455 65 | 32 00 | 1,532 77 |
| Peterboro custom-house | | 379 63 | 45 01 | 145 09 | 50 00 | 619 73 |
| " post office | | 721 53 | 413 25 | 214 80 | 75 00 | 1,424 58 |
| Petrolea post office, etc | | 437 42 | 336 76 | 273 92 | 47 76 | 1,095 86 |
| Picton post office, etc | | 392 71 | 275 65 | 198 20 | 27 00 | 893 56 |
| Port Arthur engineers' office | 605 00 | | | 18 00 | | 623 00 |
| " immigration building | | | 93 50 | 18 04 | 13 65 | 125 19 |
| " immigration office | 390 00 | | | 5 90 | | 395 90 |
| " post office, etc | | 574 78 | 418 13 | 387 43 | 89 13 | 1,469 47 |
| Port Colborne post office | | 409 58 | 142 83 | 200 41 | 20 00 | 772 82 |
| Port Hope post office, etc | | 478 67 | 386 00 | 400 68 | 35 28 | 1,300 63 |
| Port Perry post office | | 443 96 | 231 50 | 165 56 | 44 04 | 885 06 |
| Prescott, custom-house | | 115 84 | 188 62 | 38 06 | 60 00 | 402 52 |
| " post office | | 584 82 | 227 63 | 244 90 | 60 00 | 1,117 35 |
| Preston post office | | | 450 62 | | | 450 62 |
| Renfrew post office | | 380 48 | 384 16 | 768 30 | 27 00 | 1,559 94 |
| Ridgetown post office | 300 00 | | | | | 300 00 |
| Sandwich post office, etc | | 356 11 | 241 18 | 147 29 | 6 00 | 750 58 |
| Sarnia post office, etc | | 578 84 | 361 14 | 290 13 | 50 85 | 1,280 96 |
| Sault Ste. Marie post office, etc | | 1,406 34 | 555 39 | 647 49 | 135 30 | 2,744 52 |
| Seaforth post office | | 481 34 | 299 87 | 184 50 | 12 75 | 978 46 |
| Shelburne post office | | 213 09 | 402 61 | 200 63 | | 816 33 |
| Simcoe post office | | 467 15 | 86 88 | 109 92 | 20 00 | 683 95 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Ontario*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Smiths Falls post office, etc | | 585 13 | 19 50 | 476 15 | 109 25 | 1,190 03 |
| Stratford post office, etc | | 646 60 | 537 08 | 515 02 | 43 50 | 1,742 20 |
| Strathroy post office, etc | | 432 77 | 306 00 | 175 44 | 22 50 | 936 71 |
| Ste. Catharines post office, etc | | 448 00 | 508 95 | 482 98 | 126 93 | 1,566 86 |
| St. Mary's post office, etc | | 409 71 | 319 11 | 350 65 | 29 35 | 1,108 82 |
| St. Thomas post office, etc | | 430 25 | 312 50 | 129 38 | 27 35 | 899 48 |
| Tilbury post office | | 467 46 | 155 23 | 123 30 | | 745 99 |
| Tillsonburg post office, etc | | 454 78 | 459 61 | 259 00 | 35 00 | 1,208 39 |
| Toronto Asst. Receiver General's and Inland Revenue office | | 1,059 87 | 338 43 | 219 02 | 16 27 | 1,633 59 |
| " Alien Registration office, 34 Adelaide St | | 1 50 | 119 85 | 7 18 | | 128 53 |
| " Agricultural Instruction office | | | 51 42 | | | 51 42 |
| " Custom house | | 6,761 41 | 1,499 35 | 589 17 | 61 17 | 8,911 10 |
| " Custom express parcels office (Can. Exp. & Dom. Exp.) | | 852 84 | 553 01 | 874 11 | 116 60 | 2,396 56 |
| " engineer's office | 2,424 55 | | | 84 25 | | 2,508 80 |
| " examining warehouse | 92 00 | 7,777 34 | 2,937 01 | 449 85 | 118 53 | 11,374 73 |
| " garage for postal motors | | 784 00 | 457 06 | 204 26 | 22 60 | 1,467 92 |
| " immigration office, Union Station | 1,000 00 | | | | | 1,000 00 |
| " immigrant sheds, 19 Simcoe St | 30 30 | | 251 51 | 36 93 | 11 08 | 3,329 52 |
| " Marine and Fisheries | | | | 5 00 | | 5 00 |
| " post office | | 25,578 51 | 2,456 43 | 4,146 21 | 205 81 | 32,386 96 |
| " post office annex | | 361 05 | 1,296 32 | 1,057 64 | 27 45 | 2,742 46 |
| " public buildings generally | | 3,111 59 | | | | 3,111 59 |
| " parcel post, 52 Adelaide St | | 48 36 | 347 36 | 146 30 | 12 83 | 554 85 |
| " postal station "A", Union station | 3,600 00 | 2,320 07 | 15 82 | 819 62 | | 6,755 51 |
| " postal station "B" | 1,800 00 | 1 20 | 26 10 | 179 32 | 2 93 | 2,009 55 |
| " postal station "C", 1,109 Queen St. west | | 637 51 | 325 45 | 236 79 | 8 17 | 1,207 92 |
| " postal station "D", 1675 Dundas St | | 664 05 | 402 66 | 216 40 | 3 75 | 1,286 86 |
| " postal station "E" (Jct.) 585 Bloor St | 1,440 00 | 23 82 | 36 41 | 245 93 | 16 00 | 1,762 16 |
| " postal station "F", 675 Yonge St | 52 00 | 960 29 | 516 09 | 280 23 | 24 84 | 1,833 45 |
| " postal station "G", 754 Queen St | 3,000 00 | 164 92 | 42 87 | 200 28 | | 3,408 07 |
| " postal station "H" | 900 00 | 6 94 | 2 52 | 54 44 | | 963 90 |
| " " "K" | | 559 48 | 295 34 | 46 68 | 18 00 | 919 50 |
| " steamer inspector's office | 1,375 00 | | | 7 77 | | 1,382 77 |
| Trenton post office, etc | | 538 78 | 15 00 | 505 12 | 86 25 | 1,145 15 |
| Uxbridge post office, etc | | 433 05 | 372 82 | 129 74 | | 935 61 |
| Walkerton post office, etc | | 376 88 | 191 50 | 217 50 | 31 00 | 816 88 |
| Waterloo post office, etc | | 492 93 | 671 94 | 218 64 | 56 23 | 1,439 74 |
| Welland post office, etc | | 566 26 | 423 48 | 278 96 | 30 00 | 1,298 70 |
| Whitby post office, etc | | 489 78 | 211 99 | 131 46 | 38 00 | 871 23 |
| Windsor engineer's office | 792 79 | | | | | 792 79 |
| " post office, etc | | 1,213 01 | 216 60 | 924 11 | 118 69 | 2,472 41 |
| Wingham post office | | 235 06 | 311 59 | 292 50 | 29 75 | 868 90 |
| Woodstock post office, etc | | 660 35 | 317 22 | 236 92 | 39 20 | 1,253 69 |
| Total, Ontario | 31,458 40 | 109,170 20 | 49,136 33 | 45,664 84 | 5,956 10 | 241,385 87 |
| *Manitoba.* | | | | | | |
| Brandon experimental farm | | | 529 43 | 105 71 | | 635 14 |
| " immigration building, 436 Pacific St | | | 183 75 | 65 47 | 14 37 | 263 59 |
| " post office, etc | | 977 90 | 712 82 | 977 97 | 97 77 | 2,766 46 |
| Carman post office | | | 60 38 | | | 60 38 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Manitoba*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Dauphin post office, etc | | 537 85 | 635 85 | 502 78 | 64 39 | 1,740 87 |
| Deloraine immigration building | 299 97 | | | | | 299 97 |
| Emerson immigration building | | | 86 63 | | | 86 63 |
| " post office, etc | | 497 11 | 359 05 | 32 75 | 5 00 | 893 91 |
| Le Pas post office | 600 00 | | | | | 600 00 |
| Minnedosa post office | | 702 15 | 876 29 | 117 15 | | 1,695 59 |
| Morden post office, etc | | 763 20 | 621 75 | 88 97 | | 1,473 92 |
| Neepawa post office, etc | | 766 10 | 208 40 | 111 65 | 23 91 | 1,110 06 |
| Portage la Prairie armoury and public building | | 439 66 | 896 25 | 341 37 | 126 30 | 1,803 58 |
| " examining warehouse, Tupper St | 270 00 | | | | | 270 00 |
| " post office | | 623 95 | 466 85 | 355 47 | 23 83 | 1,470 10 |
| Roblin forestry office | 330 00 | | | | | 330 00 |
| Selkirk post office | | 622 50 | 294 09 | 93 01 | 41 51 | 1,051 11 |
| Souris post office | | 505 35 | 325 45 | 238 24 | 69 59 | 1,138 63 |
| Stonewall post office | | | 225 50 | | | 225 50 |
| St. Boniface post office | | 619 40 | 535 89 | 62 03 | 12 70 | 1,230 02 |
| Swan River immigration building | 165 00 | | | | | 165 00 |
| Transcona post office | 812 50 | | | | | 812 50 |
| Virden immigration building | 250 00 | | 120 25 | | | 370 25 |
| " post office | | 175 79 | 507 28 | | | 683 07 |
| Winnipeg, Boyd block, archives office, railway commission | 2,437 00 | | | 44 94 | | 2,481 94 |
| " Chamber of Commerce, Indian office, hydro-survey, weights and measures | 5,235 00 | | | 103,44 | | 5,338 44 |
| " custom house, etc | | 8,482 49 | 3,059 43 | 623 41 | 451 92 | 12,617 25 |
| " dominion buildings generally | | 4,440 71 | | | | 4,440 71 |
| " engineer's office | 928 50 | | | | | 928 50 |
| " examining warehouse | | 7,878 59 | 3,379 56 | 356,61 | 295 25 | 11,910 01 |
| " grain exhibit building | | | 27 60 | 20 35 | | 47 95 |
| " grain warehouse additional | 50 00 | | | | | 50 00 |
| " immigration building, office and hospital | 20 80 | 1,865 00 | 4,070 88 | 958 59 | 544 35 | 7,459 62 |
| " post office | 111 95 | 12,768 41 | 7,268 74 | 4,403 74 | 912 16 | 25,465 00 |
| postal station "A" | 4,038 27 | | | | | 4,038 27 |
| " "B" | | 903 60 | 882 61 | 189 82 | 44 55 | 2,020 58 |
| " "C" | 1,500 00 | 196 23 | | 128 07 | | 1,824 30 |
| " "D" | 1,796 61 | 319 45 | 334 05 | 62 42 | 9 49 | 2,522 02 |
| " Union station mail room | 2,416 00 | | | | | 2,416 00 |
| Total, Manitoba | 21,261 60 | 44,085 44 | 26,668 78 | 9,983 96 | 2,737 09 | 104,736 87 |
| *Saskatchewan.* | | | | | | |
| Abask immigration building | 90 00 | | 8 00 | | | 98 00 |
| Battleford post office | | 621 10 | 915 56 | 293 14 | 24 00 | 1,853 80 |
| " dominion lands office | | | | 69 89 | | 69 89 |
| Biggar, immigration building | | | | | 14 25 | 14 25 |
| " post office | | | 49 85 | | | 49 85 |
| Estevan post office, etc | | 513 20 | 264 40 | 235 27 | 58 50 | 1,071 37 |
| Gravelburg post office, etc | | 154 75 | 502 40 | 10 90 | | 668 05 |
| Humboldt dominion lands office | 480 00 | | 82 30 | | | 562 30 |
| " post office, etc | | 618 65 | 973 15 | 288 80 | 9 60 | 1,890 20 |
| Indian Head experimental farm | | | 504 45 | 224 45 | | 728 90 |
| " forestry office, town office | 300 00 | | | | | 300 00 |
| " forestry farm, nursery station | | | 1,009 38 | 23 13 | 122 54 | 1,155 05 |
| Kerr-Robert immigration building | 1 00 | | 185 00 | | | 186 00 |
| Lloydminster Immigration building and office | | | 206 50 | 43 20 | | 249 70 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Saskatchewan*—Concluded. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Lloydminster post office, etc | | 785 22 | 356 60 | 535 67 | | 1,677 49 |
| Maple Creek dominion lands office and crown timber office | 2,300 00 | | 193 21 | 41 80 | 89 45 | 2,624 46 |
| " post office | | 277 81 | 824 41 | 277 70 | 62 05 | 1,441 97 |
| " ranch inspectors office | 180 00 | | | | | 180 00 |
| Melford post office, etc | | 548 25 | 1,061 74 | 307 18 | 50 00 | 1,967 17 |
| Moose Jaw dominion lands office | 1,575 00 | 329 00 | | 60 24 | | 1,964 24 |
| " immigration building and office | 100 00 | | 94 17 | 33 31 | 22 65 | 250 13 |
| " Inland Revenue office | 550 00 | | | | | 550 00 |
| " post office and custom house | 350 00 | 2,576 49 | 2,626 98 | 1,424 52 | 200 25 | 7,178 24 |
| " railway mail service (Russell bloek) | 600 00 | 70 00 | | 6 64 | | 676 64 |
| North Battleford immigration building | 1 00 | | 264 85 | 58 20 | 3 65 | 327 70 |
| " immigration office | 500 00 | | | 22 25 | 17 60 | 539 85 |
| " post office | | 603 95 | 1,562 48 | 313 76 | 298 05 | 2,778 24 |
| Prince Albert engineer's office | 850 00 | 5 25 | | 11 20 | | 866 45 |
| " forestry branch office, Baker building | 960 00 | 50 10 | 196 94 | | | 1,207 04 |
| " immigration shed and office | | | 112 37 | 21 26 | 12 60 | 146 23 |
| " post office, etc | | 2,222 35 | 1,813 30 | 941 46 | 131 89 | 5,109 00 |
| Regina, customs parcels office | 3,000 00 | | | 20 56 | | 3,020 56 |
| " dominion lands office | | 1,180 35 | 575 80 | 223 42 | 65 25 | 2,044 82 |
| " immigration building | | | 294 00 | 51 85 | 32 40 | 378 25 |
| " post office, etc | 35 00 | 2,915 20 | 2,597 87 | 2,445 38 | 367 42 | 8,360 87 |
| Rosthern experimental farm | | | 136 55 | | | 136 55 |
| Ruby Lake forest reserve office | 60 00 | | | | | 60 00 |
| Saskatoon custom house | 6,000 00 | | | | | 6,000 00 |
| " dominion lands office | 2,700 00 | | | | | 2,700 00 |
| " Customs express office | 450 00 | | | 11 49 | 31 32 | 492 81 |
| " post office | | 1,972 32 | 1,380 70 | 1,060 44 | 118 68 | 4,532 14 |
| " Canada building, Inland " Revenue and railway mail service | 844 50 | | | 20 86 | | 865 36 |
| " weights and measures | 1,512 00 | | | | | 1,512 00 |
| Saskatoon forestry nursery station | | | 736 25 | | | 736 25 |
| " immigration shed and office | 150 00 | | 399 93 | 36 39 | 69 07 | 655 39 |
| Scott experimental farm | | | 302 06 | 35 29 | | 337 35 |
| Swift Current dominion lands office | 2,100 00 | | | | | 2,100 00 |
| " post office | 1,800 00 | 7 95 | 542 30 | 493 47 | 15 75 | 2,859 47 |
| Unity immigration building | | | 66 20 | | | 66 20 |
| Wadena immigration building | | | 20 00 | 25 00 | | 45 00 |
| Wilkie immigration building | 1 00 | | 154 00 | | | 155 00 |
| Weyburn post office, etc | | 538 00 | 713 91 | 549 39 | 107 70 | 1,909 00 |
| Yorkton post office, etc | | 533 90 | 1,043 31 | 977 10 | 47 65 | 2,601 96 |
| Total, Saskatchewan | 27,489 50 | 16,523 84 | 22,770 92 | 11,194 61 | 1,972 32 | 79,951 19 |
| *Alberta.* | | | | | | |
| Athabaska Landing, immigration building | | | 35 00 | | | 35 00 |
| Calgary agriculture department—seed branch, Armstrong building | 1,020 00 | | | | | 1,020 00 |
| " Blow building, 8th Ave., Irrigation office | 8,699 14 | 60 05 | | 292 98 | | 9,052 17 |
| " Franer block, railway commission | 1,300 00 | 96 00 | | 18 27 | | 1,414 27 |
| " Burns building geological survey | 200 00 | | | | | 200 00 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting | Water. | Total. |
|---|---|---|---|---|---|---|
| *Alberta*—Continued. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Calgary Cadogan building, gas and electric inspector's, inland revenue | 530 00 | | | 2 70 | | 532 70 |
| " Canada Life building, post office, inspectors and inland revenue | 12,780 00 | | | 107 90 | | 12,887 90 |
| " Costello building bonded warehouse and Mines office | 330 00 | | | | | 330 00 |
| " custom house (old post office) | | | 264 15 | 4 50 | | 268 65 |
| " David building, examining warehouse | 5,237 26 | | | 115 57 | | 5,352 83 |
| " Dominion bank building, custom house | 3,750 00 | 23 00 | | 43 70 | | 3,816 70 |
| " immigration building | 15 82 | | 353 95 | 42 47 | 98 10 | 510 34 |
| " Lesson & Lincham building, customs inspector Dominion lands office | 4,970 00 | 30 95 | | 124 44 | | 5,125 39 |
| " post office and temporary post office | 7,291 67 | 2,060 40 | 488 70 | 2,117 84 | 89 00 | 12,047 61 |
| " old post office, storage | 585 66 | | | 2 30 | | 587 36 |
| " Sharples building—customs mail department | 1,750 00 | | | 63 66 | | 1,813 66 |
| " Sullivan building, customs express department | 1,000 00 | | | 74 87 | | 1,074 87 |
| " Thomas building—forest rangers typographical office | 4,231 15 | | | 22 70 | | 4,253 85 |
| Castor immigration building and office | | | 26 95 | | | 26 95 |
| Edmonton Alexander building, Dominion lands | 5,500 00 | 322 60 | | 220 74 | | 6,043 34 |
| " examining warehouse | 2,070 00 | | | | | 2,070 00 |
| " immigration shed, hospital and office | 1 00 | 10 50 | 545 88 | 244 63 | 207 94 | 1,009 95 |
| " inland revenue, weights and measures office | 350 00 | | | | | 350 00 |
| " post office | 151 99 | 7,474 93 | 1,212 17 | 2,330 26 | 177 23 | 11,346 58 |
| Edson immigration building | | | 214 50 | | | 214 50 |
| Entwistle immigration building and office | | | 83 00 | | | 83 00 |
| Grand Prairie Dominion lands office | 220 00 | | | | | 220 00 |
| " immigration building | 780 00 | | 188 00 | | | 968 00 |
| Grouard Dominion lands office | 1,110 00 | | | | | 1,110 00 |
| " immigration hall | 520 00 | | | | | 520 00 |
| Lacombe experimental farm | | | 655 87 | 222 28 | | 878 15 |
| Lethbridge custom-house and Dominion lands office (old public building) | | 605 05 | 525 22 | 161 76 | 100 00 | 1,392 03 |
| " experimental farm | | | 202 13 | 91 73 | 11 38 | 305 24 |
| " Hull block, inland revenue | 520 00 | | | 6 85 | | 526 85 |
| " immigration building | | | 210 85 | 63 24 | 95 20 | 369 29 |
| " post office (rented) | 3,250 00 | | | 16 65 | 78 82 | 3,345 47 |
| " new public building | | 643 05 | 466 00 | 119 75 | 16 65 | 1,245 45 |
| Medicine Hat customs express office, 407 Main street | 840 00 | | | 4 47 | | 844 47 |
| " gas inspector's office | 300 00 | | | | | 300 00 |
| " immigration building and office | 325 00 | 30 00 | 16 10 | 5 00 | | 376 10 |
| " post office, etc | | 1,811 90 | 70 35 | 357 55 | 38 33 | 2,278 13 |
| Macleod custom-house | | 1 95 | 191 50 | 21 03 | 22 00 | 236 48 |
| Pincher Creek forestry office | 390 00 | | 32 72 | | | 422 72 |
| Red Deer post office, etc | | 754 25 | 278 88 | 55 83 | 39 00 | 1,127 96 |
| Rocky Mountain park superintendent's office | 350 00 | | 29 00 | | | 379 00 |
| Strathcona immigration building, hospital | | | 226 78 | 17 00 | 7 40 | 251 18 |

PART II—STATEMENT B—EXPENDITURE—*Continued.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *Alberta*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Strathcona post office, etc | | 886 20 | 602 29 | 352 52 | 44 76 | 1,885 77 |
| Vegreville immigration building and office | 200 00 | | | | | 200 00 |
| Vermilion immigration building | 1 00 | | 210 00 | | | 211 00 |
| " post office | | | 85 00 | | | 85 00 |
| Viking immigration building | | | 106 60 | | | 106 60 |
| Wainwright immigration building and office | | | 100 56 | | | 100 56 |
| Wetaskiwin post office, etc | | 623 80 | 241 72 | 280 30 | 32 53 | 1,178 35 |
| Total, Alberta | 70,569 03 | 15,434 63 | 7,663 87 | 7,605 49 | 1,058 34 | 102,331 36 |
| *British Columbia.* | | | | | | |
| Agassiz experimental farm | | | 854 70 | | | 854 70 |
| Asheroft mail room | 250 00 | | | | | 250 00 |
| Atlin post office | | 170 50 | 170 00 | 151 60 | | 492 10 |
| Burrard Inlet immigration building | 1 00 | | | | | 1 00 |
| Chase, engineer's office | | | 118 76 | 26 40 | 11 00 | 156 16 |
| Chilliwack post office, etc | | 700 00 | 209 86 | 134 44 | 36 00 | 1,080 30 |
| Comox post office, etc | | 84 00 | 61 50 | 37 25 | | 182 75 |
| Cranbrook post office, etc | | 917 94 | 532 77 | 824 93 | 44 28 | 2,319 92 |
| Cumberland post office, etc | | 672 42 | 144 50 | 87 60 | 60 00 | 964 52 |
| Duncan post office, etc | | 850 40 | 345 36 | 56 08 | 30 50 | 1,282 34 |
| Fernie post office, etc | | 871 24 | 274 00 | 235 60 | 52 65 | 1,433 49 |
| Grand Forks post office, etc | | 709 37 | 539 58 | 385 75 | 75 00 | 1,709 70 |
| Greenwood post office, etc | | 2 25 | 226 60 | | 73 39 | 302 24 |
| Kamloops forestry office | 2,016 00 | | | | | 2,016 00 |
| " Dominion lands office | 750 00 | | | | | 750 00 |
| " post office | | 777 27 | 536 00 | 506 30 | 24 00 | 1,843 57 |
| Ladysmith post office | | 606 52 | 108 69 | 87 35 | 22 00 | 824 56 |
| Nanaimo post office, etc | | 1,865 07 | 286 50 | 735 96 | 36 00 | 2,923 53 |
| Nelson district engineer's office | 504 00 | | | | | 504 00 |
| " post office | 69 00 | 668 41 | 845 48 | 980 18 | 72 00 | 2,635 07 |
| New Westminster Indian and fisheries | 9 50 | 633 45 | 205 50 | 56 76 | 26 12 | 931 33 |
| " post office, etc | 152 50 | 2,846 85 | 730 50 | 911 65 | 89 02 | 4,730 52 |
| North Vancouver post office | | 996 60 | 220 00 | 238 07 | 10 80 | 1,465 47 |
| Penticton post office, etc | | | 32 25 | | | 32 25 |
| Prince Rupert engineer's office | 109 00 | | | 2 00 | | 111 00 |
| " examining warehouse | 1,575 00 | | | | | 1,575 00 |
| " post office, etc | 5,680 00 | 9 63 | | 971 72 | 41 40 | 6,702 75 |
| Port Alberni post office, etc | 150 00 | 111 30 | 89 70 | 17 27 | | 368 27 |
| Rossland post office, etc | | 640 00 | 657 34 | 319 64 | 86 58 | 1,703 56 |
| Revelstoke post office, etc | 800 00 | | | | | 800 00 |
| " engineer's office | 1,000 00 | | | | | 1,000 00 |
| Sidney experimental farm | | | | 28 55 | | 28 55 |
| Union Bay post office | | | 82 00 | 68 25 | | 150 25 |
| Vancouver Chinese detention hospital | 300 00 | | | | | 300 00 |
| " dredging office | 2,309 00 | | | | | 2,309 00 |
| " Marine and fisheries office Empire building | 280 00 | | | 16 26 | | 296 26 |
| " examining warehouse | 5 35 | 9,433 02 | 1,690 93 | 334 17 | 35 60 | 11,499 07 |
| " post office, etc | 31 35 | 12,175 89 | 1,694 64 | 4,202 44 | 288 35 | 18,392 67 |
| " post office, old (Assay office, etc.) | | 767 55 | 715 38 | 133 44 | 93 25 | 1,709 62 |
| " C.P.R. station mail room, postal station "A" | 1,539 64 | | | | | 1,539 64 |
| " " "B" | 6,000 00 | 771 50 | 280 03 | 225 96 | 24 20 | 7,301 69 |
| " " "C" | 810 00 | 1,447 80 | | 89 79 | | 2,347 59 |
| Vernon post office | | 907 66 | 577 03 | 453 98 | 48 75 | 1,987 42 |
| Victoria Ames-Holden building, examining warehouse | 4,500 00 | 578 50 | 155 75 | 16 69 | 23 35 | 5,274 29 |
| " Belmont building post, parcel | 1,800 00 | | | 71 90 | | 1,871 90 |
| " caretakers' quarters | | | 74 00 | 16 47 | 8 51 | 98 98 |
| " engineers office | 1,476 00 | | | 19 89 | | 1,495 89 |

PART II—STATEMENT B—EXPENDITURE—*Concluded.*

| Name of Building. | Rents. | Salaries and Supplies for Caretakers. | Heating. | Lighting. | Water. | Total. |
|---|---|---|---|---|---|---|
| *British Columbia.*—Concluded. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Victoria immigration det. hospital | 22 50 | ..... | 484 50 | 260 39 | 172 44 | 939 83 |
| " Marine and Fisheries office | ..... | 793 35 | 284 00 | 181 27 | 22 03 | 1,280 65 |
| " meteorological observatory | ..... | 980 40 | 124 50 | 88 33 | 15 81 | 1,209 04 |
| " post office, etc | 84 00 | 7,217 16 | 1,755 00 | 2,907 18 | 81 42 | 12,044 76 |
| " post office, old | ..... | 288 05 | 67 50 | 54 16 | 104 97 | 514 68 |
| White Rock Immigration office, or Pacific Highways | ..... | ..... | 55 80 | 29 70 | ..... | 85 50 |
| William's Head quarantine station | ..... | ..... | 4,972 18 | ..... | ..... | 4,972 18 |
| Total, British Columbia | 32,223 84 | 49,494 10 | 20,202 83 | 15,965 37 | 1,709 42 | 119,595 56 |

PART II.—STATEMENT C.—Showing the amounts loaned by Government under the authority of special Acts of Parliament, and upon the security of debentures of the borrowing corporation. The work upon which these funds are expended are of a quasi-public nature, and the several advances have been made upon the recommendation of the Honourable the Minister of Public Works, and after inspection by the chief engineer.

| To whom loaned. | Parliamentary Authority. | Purpose. | Amount. |
|---|---|---|---|
| Nil | ..... | ..... | ..... |

# PART III

# REPORT

ON

# PUBLIC BUILDINGS THROUGHOUT THE DOMINION

FOR THE FISCAL YEAR ENDED MARCH 31, 1915

BY THE

## CHIEF ARCHITECT

PUBLIC WORKS, CANADA,
CHIEF ARCHITECT'S OFFICE,
OTTAWA, October 13, 1915.

R. C. DESROCHERS, Secretary,
Department of Public Works.

SIR,—I am sending you herewith annual report of works executed under this branch during the fiscal year ended March 31, 1915.

E. L. HORWOOD,
*Chief Architect.*

## PROVINCE OF NOVA SCOTIA.

### AMHERST.

#### DRILL HALL.

This building, 177 feet long by 85 feet wide, which was described in my report of 1914, is completed and occupied by the Department of Militia and Defence.

#### PUBLIC BUILDING.

Repaired the concrete steps and masonry work; whitening ceilings and painting post office, customs offices, including halls and stairways. Papered and painted the caretaker's quarters.

Painting clock tower and all outside metal and woodwork.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

### ANNAPOLIS.

#### PUBLIC BUILDING.

Putting water pipes in basement, with hose connections for outside service; repairing broken plaster; cleaning and kalsomining walls and ceilings of post office, and cleaning and painting walls and ceilings of customs offices on first floor.

Bronzing radiators, and providing new lock for front door of post office.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

### ANTIGONISH.

#### PUBLIC BUILDING.

Cutting through foundation wall and inserting a door and concrete steps to make an area entrance for the removal of the garbage and ashes from the basement; removing and rebuilding outside brick facing of the upper part of the clock tower; removing and replacing shelving and providing wash basin in customs office; whitening all ceilings; painting all the interior plaster walls, and painting all the interior woodwork.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## ARICHAT.

### PUBLIC BUILDING.

To shingling roof and repairing lavatory building; building cesspit in rear of main building to receive the dissolved carbide from the gas generator. To carrying wires through conduit pipes from lighting system in building and placing lights on wharf and in freight shed; repairing woodwork on main building and roof. Painting the building three coats outside, and cleaning and painting the building throughout the inside.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## BADDECK.

### PUBLIC BUILDING.

Taking off top and rebuilding chimney and erecting new flag pole on grounds in rear of building.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## BRIDGEWATER.

### PUBLIC BUILDING.

New posts and bronze handrail were placed to the front steps leading from street up to the building.

The post office halls and customs offices on first floor were cleaned and painted and the outside woodwork has been painted.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## CANSO.

### PUBLIC BUILDING.

Temporary staging was erected on four sides of building, for the purpose of cutting out soft brick and replacing them with hard ones. Two walls of top story of tower were taken out and rebuilt, and the brickwork painted to stop leaks.

Tower clock has been cleaned and thoroughly oiled. This building has been wired throughout for electric lighting and connected with town's system of lighting.

Painting woodwork on outside of building also cleaning and painting interior of building throughout.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## DARTMOUTH.

### (OLD) PUBLIC BUILDING.

Removed broken doors from cupboards and replaced same with new ones in caretaker's quarters; repaired steel letter boxes; covered roof of front porch with roofing felt, and placed Yale door check on front door.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

PUBLIC BUILDING.

A contract was entered into on July 16, 1914, for the construction of this building on a plot of ground 120 feet fronting on Quarrel street by 120 feet deep on Wentworth street.

This building is 56 feet by 52 feet, facing on Quarrel street.

It consists of basement, ground and first floors, and foundations are of stone.

Footing for all walls and under steel columns are of concrete.

Exterior walls from grade line to plinth are of granite.

Plinth to coping, including cornice and above roof are executed with olive sand stone from the Wallace quarries.

The roof has a flat top of felt, tar, and gravel.

A skylight gives light to the hall connecting the caretaker's apartments. Interior is of wood floors and lath and plaster walls.

Basement has concrete floors, excepting in toilet, which is terrazzo, and is used for furnace room, coal bunkers, storage room, vault, and toilet room. Stairs lead up to ground floor which has hardwood floors except in public lobby and vestibules of post office which are of terrazzo, with marble border and marble dado.

The space of ground floor is assigned for post office, working space, vault, public lobby, mail lobby, vestibule, entrances, and toilet room.

First floor is to be used as collector's office, Customs long room, and Customs records, with spacious corridor leading to staircase hall

The rear portion of this floor is devoted to caretaker's living quarters.

The building is surmounted by a stone tower with copper-covered roof, prepared for the reception of a tower clock and bell.

The building is heated by hot water, and lighted by electricity.

Plans and specifications were prepared by this department.

Clerk of Works, E. H. Whelpley.

Contractors, Thompson and Theakston, Halifax.

## DIGBY.

PUBLIC BUILDING.

Repaired main and slate roofs, put in lead flashings to tower walls over main roof, put crocks on chimney and did necessary outside repairs.

The large vault door in this building was removed and packed with fireproof packing.

Repaired post office letter boxes and other minor items.

Painted interior walls of tower from ground floor up, cleaned and painted walls of halls and rooms in caretaker's apartments and painted flag pole on roof of building.

Doors were adjusted and broken glass replaced.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## GLACE BAY.

PUBLIC BUILDING.

The face brickwork of this building has been thoroughly overhauled by removing broken soft bricks and replacing them with hard ones; pointing brick and stone work and making the roof watertight. Taking up and replacing sections of concrete sidewalk on street; the terrazzo floor in post office lobby was repaired and made good, and all small repairs attended to.

The interior was cleaned and walls kalsomined.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## GUYSBOROUGH.

### PUBLIC BUILDING.

A covering of earth was placed over the water pipes from the new well to prevent freezing. The surface was sown with grass seed to form a sod to hold the earth from washing away.

The old gas generator, which was beyond repair, has been replaced by a new one.

Relined w.c. tanks and made repairs to plumbing and hinged iron grating at coal window.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## HALIFAX.

### CUSTOM HOUSE.

Provided new flashing to parapet walls and repaired leaks in roof; pointed portion of stonework; planed off floor in Customs inspector's room; sashes were hung, lockers provided, and a room with two large cabinets; repaired tile floors in halls; provided new slate steps to front and vestibule doors, and minor repairs done from time to time throughout building.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

### DETENTION HOSPITAL.

Took out and replaced sections of wire caging on verandah to prevent prisoners from escaping; repaired door and put in lights of quarry glass; relined tank with copper and made repairs to plumbing; repaired broken plaster and glass, and made other repairs from time to time.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

### DOMINION BUILDING.

Took down conductors, opened and cleared drains, added new sections to conductors and replaced them; stripped roof of south porch and re-covered same with copper; all outside window frames and sashes were painted; repairs to plaster of walls in basement; walls and ceilings of basement kalsomined; freight elevator lowered down to basement floor to improve conditions of handling mails; opened and cleared drain from w.c. in basement and provided new urinal; attended to repairs as required from time to time; provided and put rollers on truck; put wire screen over accountant's office; fitted up shelving in vault in Savings Bank Department, and built storeroom for caretaker to store Government property.

All interior walls, woodwork, radiators and columns were painted three coats of paint, and ceilings were all cleaned and whitened.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## INVERNESS.

### PUBLIC BUILDING.

Leaks were attended to and stopped in roof of this building, and some minor general repairs made.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## KENTVILLE.

### PUBLIC BUILDING.

A new concrete sidewalk was put down in front of this building and two 5-cluster lamp posts were erected; a new flag pole was provided and placed at the corner of the lot; copper fly screens were supplied for the windows in the Customs offices, and minor repairs were done.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## LIVERPOOL.

### PUBLIC BUILDING.

Repaired brickwork, reset and pointed stone coping.

Repairs made to clock dials in tower, doors, window frames and other outside woodwork, from damage caused by fire in building opposite post office. Repairs were effected to outside and inside plumbing; painted outside woodwork, and other minor repairs.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## NEW GLASGOW.

### PUBLIC BUILDING.

A new fire-escape erected on the rear of building, connected with caretaker's apartments. Mail entrance in rear wall was built up 4 feet high, and a platform placed inside for the reception and delivery of mail.

Caretaker's quarters were cleaned and walls kalsomined; floors repaired; street letter boxes painted, and other minor repairs were attended to during the year.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## NORTH SYDNEY.

### PUBLIC BUILDING.

The flag pole was taken down and painted; repairs to skylight made; new concrete floor was laid in coal cellar; repairs made to letter boxes and doors; patching floor in post office lobby; new hardwood floors in vestibule and new treads to steps leading to post office; new section of the letter screen was put in, and other alterations made to the postmaster's office, as per plan.

New hardwood floors were put down in two rooms on first floor; these rooms were also cleaned and painted and provided with electric lights.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

### IMMIGRATION BUILDING (INTERCOLONIAL WHARF).

Placed hinged ceiling sash under skylight in the Doctor's and Superintendent's offices; supplied new gangway for landing passengers; installed plumbing and lavatory wash basins, etc. Oiled the floors and painted walls and ceilings.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## PARRSBORO.

PUBLIC BUILDING.

The post office was fitted up with letter screen, money order office and postmaster's room; the tile flooring was extended into the letter screen, and crocks were placed on top of the chimney to prevent same from smoking.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

Tower clock was synchronized.

Work supervised by D. H. Waterbury, Superintendent Public Buildings, New Brunswick.

## PICTOU.

CUSTOM HOUSE.

Pointed stone work and reset front steps; repaired water gutters and provided new conductors; painted outside wood and metal work; removed old sashes in tower and replaced them with new ones, and made other small repairs.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

PUBLIC BUILDING.

Repairs were made to the furnace, other minor items were executed, and the outside wood and metal work was painted.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## SPRINGHILL.

PUBLIC BUILDING.

One chimney was removed and roof made good; the old concrete wall enclosing two sides of the yard was removed and replaced by new retaining walls. The drain at the back of the building was taken up and replaced. The drain from the cellar was taken up and reset. A new concrete walk was laid in the passage from the street to the main entrance. Piers were built in the cellar to support the floor under the safe; the Customs offices were painted and thoroughly cleaned; and the desks and counters were scraped and re-varnished.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## SYDNEY.

PUBLIC BUILDING.

The furnaces were repaired and plumbing work attended to; new wood girders ·ed under the post office lobby floor; a new tar and gravel roof was put on the east addition of this building; a new stamp vendor's office was erected in the lobby of the post office; by placing lights over sorting stands and other necessary places, the lighting in the post office was improved, and the outside letter boxes were painted and general repairs attended to.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## TRURO.

PUBLIC BUILDING.

The post office part of this building was painted and otherwise attended to. Repairs to floor in post office lobby, repairs to letter boxes, new halyards to flag pole were provided. The exterior wood and metal work was painted; brickwork in outside walls was taken out and rebuilt and outside plumbing attended to. A new stamp vendor's office was erected and pipes supplying heat provided in the post office lobby.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## WESTVILLE.

### PUBLIC BUILDING.

Door checks were provided for the post office doors. The interior of the building was cleaned and painted and other minor repairs attended to.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## WINDSOR.

### PUBLIC BUILDING.

The wood floors in the post office lobby, money order and vestibules were taken up and replaced; a new white tile floor laid on concrete supported by brick piers and wood centres in basement; the working part of post office was covered with new hardwood floor. The walls kalsomined and all the woodwork painted and re-varnished; the inside doors were re-arranged and fitted with new hinges and locks. The customs rooms were painted three coats; walls and ceilings, and the examining room painted and walls kalsomined. A ladies toilet room was fitted up on the first floor. The fence enclosing the grounds was taken down, rebuilt and painted. A new flag-pole was erected at the corner of the building; two 5-light lamp posts were erected in front of the building, light to be taken from the building. Other small and necessary repairs were attended to. A set of granite steps for postal receiver were placed in front of the building with newspaper and letter drops, under the centre window. A new desk and cupboard in the post office lobby to receive the mail matter from outside.

Work supervised by W. Bishop, Inspector of Dominion Buildings, Nova Scotia.

## WOLFVILLE.

### PUBLIC BUILDING.

Lights were set up over the doors of the post office and customs entrances. Steps were built at mail entrance; the interior fittings of the post office, screens, desks in public lobby, brass name plate and kick plates on the doors have been executed by contract. Copper wire fly screens were placed to windows; new grates supplied to one of the furnaces. A new wire fence has been erected to enclose the property. A one-dial clock was installed in the front gable of this building with bell placed on roof and all woodwork provided for same. Four 5-light standard lamp posts were established on the grounds in front of the building.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## YARMOUTH.

### PUBLIC BUILDING.

Rearranged electric lights in post office, and removed old lavatory in Customs' part and replaced same with new plumbing fixtures and connections.

Work supervised by W. Bishop, Inspector Dominion Buildings, Nova Scotia.

## PROVINCE OF PRINCE EDWARD ISLAND.

### CHARLOTTETOWN.

#### OLD BANK BUILDING.

In the Marine offices, the woodwork was painted, walls alabastined, ceilings whitened, floors varnished and radiators bronzed.

Lettering and gilding sign for Marine Department.

Ventilators installed in three windows.

Several offices in the Engineer's quarters were painted, walls treated with papering or alabastine and ceilings whitened.

The stairs were furnished with rubber matting, nosings of brass; the corridor floored with linoleum, and Brussels carpet laid complete.

A generator and thermometer were supplied.

The old fence around property was repaired, a new section of 45 feet built and the whole painted.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

#### PUBLIC BUILDING.

Repairing ornamental stonework; the east entrance to basement; woodwork of basement entrance doors, and tile floor in public lobby.

Supplying grate bars to boiler, and providing and fitting up smoke-pipe connections.

Repairing gas fixtures; making changes in gas pipes and lowering wash basins.

Painting exterior and part of interior woodwork of building (as specified); lettering signs on office doors.

Furniture was supplied as follows: One quarter-cut oak table for Customs; two Wilton squares, letter sectional case, two-section wardrobe, one 34-section filing cabinet for Gas Inspector, and 32 yards linoleum and felt were placed in post office inspector's staff office.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

### GEORGETOWN.

#### PUBLIC BUILDING.

Sundry repairs were executed consisting of: Floors painted two coats, new basement window, fitting doors and hardware and providing bronze lock to front door of post office, fixing box and anchoring down outlet to sewer.

Customs rooms were painted and walls tinted.

The exterior brickwork was painted.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

## MONTAGUE.

### PUBLIC BUILDING.

The mailbag rack was remodelled; oak sorting table provided; a new hardwood floor was laid and the Customs rooms woodwork painted, walls and ceilings alabastined and fittings varnished.

Certain interior changes were made to the post office, and the fence was repaired and painted.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

## SOURIS.

### PUBLIC BUILDING.

Cutting, fitting and setting up mailbag rack and providing the sorting table to same.

Two wardrobes were supplied; shelving refitted and making wooden steps, and linoleum was laid on floors of Customs offices.

Caretaker's quarters cleaned by an application of papering, alabastine and whitening. Radiators bronzed.

The outbuildings were painted; the gas producer house was provided with a new radiator; certain changes were made in the interior of the building according to plans and specifications; an iron railing was placed around the deck roof, and four-light gas fixtures attached to outlets.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

## SUMMERSIDE.

### PUBLIC BUILDING.

A contract was entered into with Henry P. Wood, of Summerside, P.E.I., to construct alterations and additions to post office building.

This work consists of a one-storey addition with basement under the entire space in rear of the present building 39 feet by 18 feet 8 inches, providing an extension to the working part of post office, with mail lobby or entrance, and separate men's and women's toilet rooms.

The same description of material was used to harmonize with the present building.

A large skylight furnishes light to the working part of the post office.

Conduit piping, electric wiring and fixtures were provided for all parts of the building.

The wires of the town system of electric lighting was connected with the building.

A clock tower of frame construction, covered with copper, was erected on the main roof.

The J. T. Schell Co., Alexandria, Ont., supply an installation of the interior post office fittings, as per contract.

Two radiators were removed and replaced in the post office, and sundry repairs made to the heating and plumbing.

Doors repaired, removing and replacing postal street receivers.

Work supervised by J. J. McDuff, Superintendent Dominion Buildings, Prince Edward Island.

## TIGNISH.

PUBLIC BUILDING.

Hot-air engine repaired and leather belt supplied for same.

Supplying belts for circulating water pump. New pump head and jack combined and a 4-inch brass cylinder, all placed in position, with expansion tank, and putting in new closet tank.

Repairing radiator and plumbing; supplying one set grate bars to hot water boiler; stair treads provided with rubber matting and brass nosings; the "open wiring" of the basement was replaced by conduit piping and electric wiring and lamps.

Concrete work was laid in front of building, according to plans and specifications supplied by the Department, Ottawa.

A copper covered door was provided for coal chute; enlarging the manhole or trap door to roof space, and building steps from roof space to attic floor; whitening ceilings and papering walls of caretaker's quarters, and repairs to glazing were effected.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

# PROVINCE OF NEW BRUNSWICK.

## BATHURST.

PUBLIC BUILDING.

Water tank relined with copper, and closet tank relined; eaves gutters cleaned; painting and varnishing interior; windows repaired; new storm sashes supplied, and three w.c. bowls renewed.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## CAMPBELLTON.

PUBLIC BUILDING.

Concrete sidewalk laid in front of building; painting in lobby; repairs made to clock; fence painted; repairs made to plaster; large clock dial cut to size; broken opal glass centres and dials repaired; yard cleaned; gravel supplied and spread over same; fence posts straightened; two pigeon-hole cases constructed for railway mail service; repairs made to toilet door; linoleum covering supplied for stamping table, and tower clock repaired.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## CAMPOBELLO.

FISHERIES OFFICE.

Cabinet supplied Fishery Inspector.

## CHATHAM.

### PUBLIC BUILDING.

New reinforced concrete culvert laid from building to river, and examining warehouse roof reshingled with steel shingles.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

### QUARANTINE STATION.

Hospitals shingled.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## DALHOUSIE.

### PUBLIC BUILDING.

Kalsomining and painting in post office and lobby; repairs were made to clock; basement concrete floor renewed; new letter boxes installed, and repairs made to gutters and pipes.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## FAIRVILLE.

### PUBLIC BUILDING.

Tower clock synchronized; main floor of post office stained and varnished; batteries supplied clock, and sundry small repairs effected.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## FREDERICTON.

### EXPERIMENTAL FARM.

### DOUBLE COTTAGE.

A semi-detached dwelling house was erected by day labour for the Agriculture Department by the Public Works Department.

The main part of the houses is 35 feet 10 inches by 30 feet 10 inches; kitchen wing 20 feet 10 inches by 11 feet, containing basement, ground and first floors.

The foundation and dividing walls of basement are of concrete; internal four flue chimney of brick, external walls, inside partitions, floor and roof timbers of wood. Lath and plaster walls.

The basement is used for furnace, fuel and vegetable storage cellars.

A verandah runs across the front of building. The ground floor is divided for vestibules, living rooms, dining rooms, pantries, kitchens and summer kitchens or sheds.

Stairs lead up to first floors from living rooms and down to basements from dining rooms.

On the first floor are three bed rooms with clothes closets in each room, and bath rooms, with plumbing fixtures.

POULTRY ADMINISTRATION BUILDING.

This building 18 by 28 feet, consists of a one story and half frame building with shingled walls and roof on a concrete foundation, giving a basement the full size of building. An outside area entrance porch, with stairs leading to basement and ground floor, adjoins on the side.

The basement space is devoted to incubator, egg and coal rooms.

The ground floor is subdivided into two offices with stairs between, leading to basement and first floor, also area stairs to the outside.

On the first floor are two rooms lighted by gable windows.

A double flue chimney from the basement upwards, serves for the use of stoves.

This work was built by day labour, under the direction of the Agricultural Department.

IMMIGRATION OFFICE

Heating pipes were covered with asbestos.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

PUBLIC BUILDING.

Sundry heating and plumbing work done.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

NEW PUBLIC BUILDING.

This building, which was described in my report of 1914, is still in progress. A contract has been awarded for the interior fittings of post office.

A new turret clock supplied and installed; tower floor cut through; chute built and weight lines extended; two opal lights supplied for clock dials, and dial castings repaired.

Plans prepared by this department.

Clerk of Works, Alexander C. Fleming.

Contractors, Falconer & Macdonald.

## GRAND FALLS.

PUBLIC BUILDING.

Clock tower wired for electric lighting, and boilers covered with asbestos.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## HAMPTON.

PUBLIC BUILDING.

This building, which was described in the report of 1914, is completed.

Tower clock supplied and installed; post office fixtures installed in new building; stone cut for letter receiver; window blinds, lamps, chimneys and oil supplied; one roll top desk, one clock, one table and three chairs supplied post office, also cabinet constructed, and small repairs made to radiator.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## HARTLAND.

PUBLIC BUILDING.

Painting and kalsomining done; concrete walks laid; concrete wall built at side of lot, and repairs made to shoring.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## HILLSBORO.

PUBLIC BUILDING.

Counter and cabinet built and placed in Customs office; radiator removed to better location; hot water boiler cleaned and repaired; pump repaired; repairs made to gas lights; concrete walks laid and grading done; storm door fitted and hung, and repairs made to flashing around chimney.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## MARYSVILLE.

PUBLIC BUILDING.

Painting, pointing and concreting was done; erected and painted wire fence; repairs made to pump; grading done; locks and doors repaired; signs in post office enamelled; acetylene lighting plant installed; new trap put under kitchen sink; hot water pipe, fittings, etc., renewed, and repairs made to clock.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## MILLTOWN.

PUBLIC BUILDING.

A contract was entered into on May 4, 1914, for the construction of this building on a plot of land situated on the northwest corner of Main and Pleasant streets.

The size of the building is 38 feet 6 inches by 53 feet, comprising basement, ground, first and attic floors.

The footings and external basement walls are of concrete with a facing of stonework from grade to level of base course.

From plinth to cornice, the external walls are of a red pressed brick with cut-stone sills, string courses and trimmings.

Roof is of wood with galvanized iron mansard and flat top deck of felt, tar and gravel covering, with skylight to light hallway in caretaker's quarters. Interior is of wooden floors, lath and plaster walls. Tile floors in all toilet rooms, vestibules and public lobby.

Basement has concrete floors, is used for furnace room, coal bunkers, storage room, with hall and stairs to the ground floor.

The ground floor space is allotted to post office, working space, three entrances, vestibules, public lobby, examining warehouse and toilet room. The main staircase leads to first floor on which are offices for Customs collector, Customs long room and record room, and one spare office with toilet room.

Attic is made into living quarters for caretaker. The tower room is prepared for the reception of clock machinery.

On the corner of the building, a tower is carried above the level of deck roof and provides for the installation of an eight-day tower clock with bronze bell in the louvred chamber below dial room.

The roof is of galvanized iron, terminated by an iron finial.

The building is heated by hot water and lighted by electricity.

Plans and specifications prepared by this department.

Clerk of Works, John Porter.

Contractors, Joseph MacVay & Son.

A contract has been entered into on January 16, 1915, for the supply and installation of post office and customs fittings.

Contractors, Haley & Son.

## MONCTON.

### PUBLIC BUILDING.

Stamp vendor's office built, and furnace gas burners renewed with thermostatic attachment.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick

## NEWCASTLE.

### PUBLIC BUILDING.

New metal roof and bell hood placed on roof of building; tower clock installed; clock tower wired for electric lighting; new ladders for clock tower were supplied; alterations made in chase for clock weights; papering, whitewashing, etc., done in caretaker's quarters; tungsten lamps supplied, and cabinet supplied for Fishery inspector.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## RICHIBUCTO.

### PUBLIC BUILDING.

Tank was relined, new bath and w.c. installed; repairs made to plank sidewalk; window sashes stripped with quarter round and painted; small woodwork repairs effected; earth hauled and spread over lawn; blinds, lamps and oil supplied; drainage pipe renewed; concrete floor laid in basement; building pointed; repairs to plaster, walls and ceilings; roof repaired; glazing done, and repairs made to chimney. Four new front doors were supplied.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## ST. JOHN.

### ARMOURY.

Concrete sidewalks, curb and gutter laid; lot levelled; ploughing, seeding and harrowing done; metalled roadway with sidewalk constructed at front and concrete coping at side and end of lot, and clay and débris removed from side of rear lot.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

CUSTOM-HOUSE.

Sanitary matters had attention during the year as usual; washing of windows, floors, etc., clearing away of snow and ice, ashes and rubbish. Electric bells, batteries, telephones, etc., kept in order. Furniture, carpet, and mats supplied Inspector of Customs office; chairs in Collector of Customs office repaired; guides and folders for filing cabinet supplied Inspector of Inland Revenue; manila rope supplied for hoist; desk and chair supplied Resident Engineer. Electric power cable brought from street into building and connected with motor of passenger elevator; electric passenger elevator installed. Signal officer's quarters renovated, painted and kalsomined; steel truck supplied Customs; caretaker's quarters renovated; repairs made to hydraulic hoist; sundry repairs to plumbing, and glazing; counter altered in gauger's room for use of Militia; latch locks placed on doors; eaves gutters cleaned out and repaired; repairs made to copper roof; sundry repairs to woodwork, coal bin, floors, etc. Rugs and furniture supplied for the Honourable the Minister of Marine and Fisheries. Chart case, filing cabinet and mirror supplied for Resident Engineer, and office painted. Repairs were made to hot water boiler in Signal officer's apartments; linoleum and rugs supplied Customs Inspector's office; broken signal mast removed from tower and copper roof repaired; door plate supplied District Engineer's office; repairs made to time ball and appurtenances; basement stairway enclosed by T. & G. partitions, with locked door, making Appraiser's room and storage more secure. Steel filing cabinet supplied Marine Agent's office. New basin installed and repairs to plumbing in Gas Inspector's office; new steel signal mast with topmast, arms, etc., erected and rigged on tower; repairs made to coal cart; clocks in long room and P.W. District Engineer's office; portion of iron casting on roof renewed; cabinet and screen supplied office of District Inspector of Inland Revenue; argand burners and gas mantles renewed; windows repaired, and sash cords, etc., renewed.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

POST OFFICE.

Sanitary matters had attention during year as usual. Windows washed, some cords renewed; scrubbing, etc., attended to; snow, ashes and rubbish carted away; engineer's and caretaker's stores and implements supplied; fuel stored; parcel chute relined with zinc; electric lamps supplied; office chairs supplied postmaster; floor brush and crate of "No-Dust," supplied; repairs made to electric bells; glazing done; speaking tubes repaired; new incinerator built in basement; street letter boxes and parcel receptacles painted. Tower clock had attention; repairs to stamping machine and electric lights; desk and tilter chair supplied for Postal Stores clerk. Repairs made to furniture and plumbing; sundry repairs to woodwork, floors, counter, etc., room in attic painted; repairs made to roof; considerable repairs to hoist, and wire rope renewed. Post-office boxes numbered and repairs made; disinfecting machines installed; painting and kalsomining done; cabinet supplied office Superintendent Railway Mail Service; lamp globe at front door relettered; flushometers repaired; two rubber stamping pads supplied; new fanlight put in superintendent's office; three new office stools supplied and some repairs made to others. Galvanized-iron draught shields placed at mezzanine floor windows, and clock in lobby synchronized.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

NEW POST OFFICE.

The construction of this building, which was described in my last year's report, is still in progress.

A contract has been awarded for the supply and installation of one passenger and one freight elevator, also one ash hoist.

Plans, etc., prepared by this department.

Resident architect, C. E. Fairweather.

Contractors, Rhodes, Curry & Co.

MARINE AND FISHERIES.

Floors in offices in Canadian Bank of Commerce building were stained and varnished; chart case, locker, notice board, black board, shades, desk, chairs, tables, portable lamp and tungsten lamps were supplied to office of Examiner of Masters and Mates. Filing cabinet supplied for Fishery Inspector's office.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

NEW METEOROLOGICAL OBSERVATORY.

Furniture supplied.

Under the supervision of D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

SAVINGS BANK.

Attention was given sanitary matters, repairs and supplies, gas lighting, etc. Painting, papering and whitewashing done in caretaker's apartments; repairs made to boiler and smoke box; new flag mast raised and installed on building; top mast painted, ball gilded, steel wire halyards supplied; repairs made to masonry; linoleum and rugs supplied to Assistant Receiver General's office; repairs made to windows, and sundry repairs to plumbing.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

MARTELLO DETENTION HOSPITAL.

Fence around building repaired and grass on lots sold.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

PARTRIDGE ISLAND QUARANTINE STATION.

Pipe and fittings supplied; window screens and screen doors made and fitted; wire fencing and gates supplied and erected; sewerage and water main constructed for new detention building; room of Medical Superintendent's residence was papered and whitened, and repairs made to front door and hall. Grading done at Assistant Bacteriologist's residence. Lamps and oil supplied new first-class detention hospital. New grates put in furnace, and other repairs made in old building.

New first-class detention building completed, inspected and final estimate sent with report.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## ST. JOHN WEST.

POST OFFICE.

Tower clock had attention; photograph of building taken for department. Pointing was done; sundry repairs effected; floor of extension having sunk owing to settlement of cross walls, H beams were placed, floor raised and masonry improved; kalsomining and painting done; repairs made to plumbing and vault door; bell house

tor tower clock bell was constructed and bell and striking apparatus installed. New ball and halyards supplied and flag pole repaired; vent pipe placed in closet; electric meter inspected, and repairs made to electric lights.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

IMMIGRATION BUILDING.

Padlocks were supplied; repairs made to gravel strips; windows removed, cleaned and replaced. Painting and kalsomining done and seventeen lights of glass set in windows; repairs made to main water pipe and valve; boilers repaired, new headers, etc., new nipples and lock nuts put on; new lining put in kitchen range, pipes cleaned; ash barrels and manila rope supplied, and repairs made to sewer.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## ST. STEPHEN.

PUBLIC BUILDING.

Asphalt sidewalk was repaired. Papering and painting done; locks, door sets and keys supplied.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## SUSSEX.

PUBLIC BUILDING.

Two electric light posts erected on lawn in front of building; repairs made to building; hardwood floor laid in Customs room; cement floor in basement repaired; lobby and vestibule tiled; gable reconstructed; some masonry work done in machinery room, and clock installed and wired for electric lighting.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## TRACADIE, LAZARETTO.

Building and fencing repaired; carpenter work, plastering, painting, floor varnishing, etc., done; screens, etc., supplied.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## WOODSTOCK.

PUBLIC BUILDING.

Closet was installed on Customs floor; repairs made to flag pole and chimney; repairs made to safe; heating system improved; building pointed; slate roof repaired; stone wall of lot repaired and pointed; painting, kalsomining, varnishing, glazing, etc., done; repairs made to screen and doors painted; hardwood floor repaired in post office, and improvements made to plumbing, down pipes, vent, etc.

Work supervised by D. H. Waterbury, Superintendent of Public Buildings, New Brunswick.

## PROVINCE OF QUEBEC.

### ARTHABASKA.

PUBLIC BUILDING.

The tar and gravel roofing was renewed. The tops of all the brick walls and the chimney had to be repointed and the top of the brick and stone pediment was partly reconstructed. The furnaces were also repaired.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

### CAP ROUGE.

EXPERIMENTAL FARM.

An incubator house in accordance with plans prepared by the department, was erected on this farm.

G. S. Gingras, Clerk of Works, Montreal, Que.

### CHICOUTIMI.

PUBLIC BUILDING.

During the present fiscal year, the room reserved to the weights and measures inspector had been transferred to the Department of Public Works for the use of the District Engineer; a bath for blue printing has been installed.

### COATICOOK.

PUBLIC BUILDING.

All the roofs were repaired and painted; the plumbing was also repaired. The whole of the interior post office fittings were renewed, and many other minor repairs were carried out.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

DRILL HALL.

A contract was awarded May 14, 1914, for the construction of a drill hall.

The site has a frontage of 133 feet by a depth of 324 feet, the building is set well back from the street.

The building is 88 feet wide by 134 feet 4 inches long.

The footings and foundations to plinth are of concrete, from plinth to top of building the walls are of red facing brick with cut stone sills, copings and trimmings. The wooden roof is supported on steel trusses over projecting buttresses and walls and is covered with galvanized iron. The interior walls of drill hall are finished with red facing brick, other rooms, wood partitions executed in lath and plaster, with wooden trimmings to doors and windows.

There are basement, ground and first floors. The basement floor at one end of building is used for gun room, harness and store rooms, shooting gallery, furnace and fuel rooms, with stairs up to level of drill hall floor.

The drill hall is 80 feet in width by 104 feet in length with six armouries at the rear end opening to hall. One stairway at either side gives access to a gallery overlooking the drill hall at one end on the first floor, from which open officers', sergeants' and men's rooms and lavatories.

Heating is by hot water, lighting by electricity.

Plans and specifications prepared by Department of Public Works.

Clerk of works, Charles E. Christie.

Contractor, William J. Welsh.

## DRUMMONDVILLE.

### PUBLIC BUILDING.

The electric light wiring throughout was renewed. The post office box screen repaired and improved, and an enclosure to the mail entrance was erected.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## DUNDEE.

### CUSTOM-HOUSE.

The whole of the exterior of this building, out-buildings, iron fences, etc., were painted and minor repairs to the building were carried out.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## EAST ANGUS.

### PUBLIC BUILDING.

A contract was entered into on the 10th June, 1914, for the construction of a public building.

The building, which is 48 by 60 feet, is placed on an irregular quadrangular lot, bounded by Sherbrooke and Station streets and Angus road.

There are basement, ground and first floors. The foundation walls and footings are of concrete plastered with Ceresit cement. The walls and pilasters are of brick with stone capitals and bases. Tower and cornices, etc., are covered with galvanized iron. The roof is composed of felt and gravel, around which are cast-iron balusters and railing.

The basement floor is concreted and the partition walls composed of brick. The building is reinforced by steel beams and columns. The floors are hardwood, except those in public lobby, vestibules and toilet rooms, which are covered with terrazzo. There are cement dados in post office vestibules and toilet rooms, and the cornices on ceiling of ground floor are of plaster.

The basement is used for furnace, fuel storage and toilet room; the ground floor for post office, vestibules, lobbies, toilet room, vault and staircase hall; the first floor for offices and caretaker's quarters.

The building is heated by hot water and lighted by electricity.

Plans and specifications prepared by Messrs. Taylor & Horwood, architects, Ottawa.

Contractors, Loomis-Dakin, Limited.

Clerk of Works, Fred. Little.

## FARNHAM.

EXPERIMENTAL FARM.—A PAIR OF SEMI-DETACHED COTTAGES.

A contract was entered into on the 11th February, 1914, for the construction of a pair of semi-detached cottages, covering an area of about 67 by 23 feet, exclusive of the sheds at the rear, which are included in the same contract.

These buildings are of balloon frame construction, set on concrete walls, covered on the outside with clapboards up to first floor, and with shingles from first floor to the eaves. The roof is also shingled. The party wall and the walls around coal cellars are of brick.

There are three floors, viz., basement, ground and first. The basement floor, built of concrete, is allotted to the furnace, coal room, cellar and storage.

The ground floor, which is finished in hardwood, is reserved for dwelling and office purposes.

The first floor, also of hardwood finish, is divided into bedrooms, and bathroom with plumbing.

The dwellings are equipped with hot air furnaces and electric wiring.

Plans and specifications prepared by this department.

Contractor, A. B. Comeau, Farnham, Que.

PUBLIC BUILDING.

The roof, gutters and rain conductors were repaired; the fences straightened, repaired and painted. The shed on the rear of the property was also repaired and painted.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## GRANBY.

PUBLIC BUILDING.

The whole of the exterior woodwork was painted. A tile flooring was laid in the public lobby and customs entrance lobby, and many other minor repairs were attended to.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## GROSSE ISLE.

QUARANTINE STATION.—THIRD-CLASS DETENTION BUILDING.

On November 3, 1914, a contract was entered into with Messrs. P. Lyall & Sons Construction Co., Ltd., for the construction of the above building, to be in accordance with plans and specifications prepared by the Department of Public Works. The work will be started in the spring of 1915.

This building, 200 x 30 feet, will be entirely of concrete reinforced with steel beams and columns, having a basement, ground and first floor.

The basement will consist of only a small excavated portion 47 by 30 feet under the centre of the building, with the floor of concrete, and will contain a furnace and coal room.

The ground and first floors of hardwood will be similar, having kitchens and halls at each end, with a corridor down the centre, off which will be the immigrants' berths.

There will be a sliding door and a fireproof door across the centre of the corridor, and four toilet rooms on each floor. Two entrances will be placed in front and one on each side of the building. The roof to be of shingle.

The system of heating will be by hot water, and the building will be lighted by electricity.

Plans and specifications prepared by this department.

Work supervised by J. A. Tremblay, District Engineer, Quebec.

Contractors, P. Lyall & Sons Construction Co., Ltd.

REPAIRS TO ELECTRIC AND TELEPHONE LINES.

During the heavy storm of February last, the high wind and frozen rain caused considerable damage to the electric light and telephone lines; many posts were broken and most of wiring was thrown down with cross-arms, insulators, etc. In order to have the lines ready for the opening of navigation, the necessary repairs were performed.

Work supervised by J. A. Tremblay, District Engineer, Quebec, Que.

## IBERVILLE.

PUBLIC BUILDING.

A section of the concrete walk on the front of the property was reconstructed. The whole of the interior woodwork was painted.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## JOLIETTE.

PUBLIC BUILDING—ADDITION.

A contract was entered into on July 17, 1914, for the following alterations and addition:—

A clock tower and an additional two stories, also mail lobby and post office platform were added on the northwest side and rear of the existing building.

Portions of the old walls and partitions had to be removed.

The walls of these extensions are built of rock faced and Canadian cut stone similar to walls of existing building. The footings are of concrete and foundations of rubble masonry covered with Toxement cement plaster.

The flat roof is composed of felt and gravel, but the sloping roof of the clock tower is covered with galvanized iron.

With the exception of terrazzo floors in vestibules, public lobbies and toilet rooms, there are hardwood floors throughout.

The location of the old hot water furnace was changed and twin connected to a new one of similar design.

Accommodation of the ground floor of this extension is allotted to the post office for working space, customs for examining warehouse, inland revenue for weights and measures office, and the extra space is for the public lobby. A new vault has also been constructed on this floor.

The first floor accommodates the customs and inland revenue offices with two new vaults. There is on this floor a toilet room.

The building is lighted by electricity.

Plans and specification were prepared by this department.

Contractors—Joseph Archambault & Co.

Clerk of Works—Stephen Robitaille, headquarters staff, Ottawa.

## JONQUIERES.

PUBLIC BUILDING.

A contract was entered into on the 27th June, 1914, for the construction of this building, situated on a lot 55 by 100 feet, corner of St. Thomas and St. Dominique streets.

The building measures 36 by 48 feet. The footings under walls, cross walls and columns are of concrete. The masonry is rubble work covered with Toxement cement plaster. The external facing to top of water table is of granite (rock face random coursed work). Facing stone, excepting the above, of approved stone. Corner entrance is of white porphry. East and north elevation is of pressed brick. The building is reinforced with steel beams and columns. The columns are protected by concrete. There are galvanized iron cornices. The roof is of felt and gravel.

The interior constructional materials are as follow: Cement floor in basement and mail lobby. Terrazzo floors in ladies' toilet in attic and ground floor vestibules, and public lobby. The balance of the floors are of hardwood. There are cement dados in post office, mail lobby, toilet rooms and vestibules.

The building has a basement, ground and attic floors.

The basement is divided into space for boiler room, storage and stairway.

The ground floor comprises post office, vestibules, lobbies, gentlemen's toilet and caretaker's entrance.

The attic floor is used for the caretaker's quarters and ladies' toilet.

The building is heated by hot water and lighted by electricity.

Plans and specification prepared by this department.

Contractors are Marois & Girard.

Clerk of Works, Trefflé Gauthier.

## KNOWLTON.

PUBLIC BUILDING.

The whole of the interior of this building was either kalsomined, painted or varnished as the case applied. The whole of the interior openings were also painted. The driveway on the rear was paved with concrete, and other repairs were carried out to the plumbing and roofs.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## LACHINE.

PUBLIC BUILDING.—ALTERATIONS AND ADDITIONS.

This building, which was described in the report of 1914, is completed.

The bell and tower clock with all the necessary attachments supplied from the manufacturer.

Labour and materials, etc., preparing clock tower, installing clock dials, placing bell, wiring tower for electricity and lighting clock faces.

Jeweller installing bell and tower clock machinery.

Building of interior partitions, fences to property and concrete wall, also concrete platform.

Interior post office fittings were supplied and finished.

Supervising architect, D. Viau, Montreal, Que.

## LAPRAIRIE.

PUBLIC BUILDING.

The roof was repaired as well as the roof gutters and rain conductors. The concrete walk on the front of the building was rebuilt, and a new concrete walk to the rear mail entrance built. The stone steps to the main entrance were relaid and in some cases renewed. All the exterior openings were painted. The interior was wired for electric light. The interior was either kalsomined, painted or varnished as the case applied.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

A contract was entered into on 15th July, 1914, for the installation of the electric wiring and post office fittings.

## L'ASSOMPTION.

PUBLIC BUILDING.

The fences were repaired and painted, and the grounds about the building were graded and sodded. The whole of the exterior openings were painted. Some minor repairs to the plumbing and heating systems had to be attended to.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## LACHUTE.

PUBLIC BUILDING.

The interior was cleaned, kalsomined, painted or varnished as the case applied, and the whole of the exterior openings painted or varnished.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## LAKE MEGANTIC.

PUBLIC BUILDING.

The interior was kalsomined and painted, and minor repairs were attended to. An entrance to the basement on the rear of the building was built.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## LEVIS

ARMOURY.

This building, which was described in the report of 1913, is completed.
Plans and specifications prepared by this department.
Clerk of Works, Flavien Dorval.
Contractors, The Ideal Construction Co.

## LOUISEVILLE.

PUBLIC BUILDING.

This building, which was described in the 1914 report, is completed.
Plans and specifications prepared by this department.

Clerk of Works, P. A. Mousseau.

Contractor, Joseph Bourque.

A contract was awarded August 20, 1914, for the making, erection and finishing of interior post office fittings.

## MAGOG.

### PUBLIC BUILDING.

The whole of the interior was, as the case applied, either kalsomined, painted or varnished, and the exterior openings were likewise treated. Other minor repairs, generally, had to be attended to.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## MARIEVILLE.

### PUBLIC BUILDING.

The roof was repaired, some sections of the concrete sidewalks were rebuilt, the brick walls generally repointed. The heating system was repaired. It was also necessary to readjust all door and window openings throughout.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## MATANE.

### PUBLIC BUILDING.

A description of this building appeared in the report of 1914, work is still in process of construction.

A contract was awarded January 27, 1915, for the supply and installation of interior post office fittings.

## MONTMAGNY.

### PUBLIC BUILDING.

Many sections of the plaster, ceilings, and walls had to be renewed. The whole of the interior was painted. The lighting system was improved and minor additions had to be made to the plumbing system.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## MONTREAL.

### NEW EXAMINING WAREHOUSE.

This building, which was fully described in the report of 1913, is still in process of construction.

Plans and specification prepared by this department.

Resident Architect, A. H. Lapierre.

Contractors, The P. Lyall & Sons Construction Co., Ltd.

A contract was awarded December 22, 1914, for the supply and installation of two electric passenger elevators and six freight elevators.

DETENTION HOSPITAL.

The construction of this building, a description of which appeared in the report of 1913, is completed.

POSTAL STATION "F."

This building, which was fully described in the report of 1914, is completed.

Plans and specifications prepared by T. J. Spence, architect.

Contractor, Joseph Bourque, Hull, Que.

A contract was awarded February 15, 1915, for the supply and finishing of the interior post office fittings.

POSTAL STATION "H."

This building, which was fully described in the report of 1914, is completed.

Plans and specifications prepared and work supervised by Cox & Amos, architects.

A contract was awarded December 28, 1914, for the making, erecting and finishing of interior post office fittings.

POSTAL STATION "L" (WESTMOUNT).

This building, which was fully described in the report of 1914, has been completed.

Plans and specification prepared by A. Piché, architect.

Contractor, John Quinlan.

A contract was awarded March 27, 1915, for the supply and installation of interior post office fittings.

HOCHELAGA POST OFFICE (BRANCH).

*Alterations and Additions.*

A contract was entered into on the 9th July, 1914, for the following alterations and additions:—

Iron stairs and balcony were installed.

Two new vaults were built: one on ground floor, the other on the mezzanine floor. These have concrete floors reinforced by expanded metal and supported by steel beams and columns. The inside lining walls are made of hollow full porous terra-cotta.

A new lavatory for men has been put in the basement, the floor of which is terrazzo and the walls glazed tiles.

A new dado of Keen's cement has been put in the mail lobby.

Plan of alterations and additions prepared by this department.

Contractors, J. A. Major & Co.

GARAGE—ALTERATIONS AND ADDITIONS.

A contract was entered into on the 24th October, 1914, for the alterations and additions to the above building, 3700 University street, for the Forestry Branch.

The following alterations were made to the old portion of the building: The wooden floor on the ground was removed and replaced by concrete; partitions on ground floor removed; stairs from ground to first floor removed and new stair put in; cast-iron columns were also removed; entire west wall removed and a new steel girder and steel beams inserted in its place; two new windows put in the roof; to this building was added a one-story brick 30 by 30 foot addition, with lime-stone sills, concrete floor and felt and gravel roof.

Plans and specification were prepared by this department.

Contractors—Messrs. J. & W. Morrison, Montreal.

Clerk of Works, J. Godin.

## MURRAY BAY.

### PUBLIC BUILDING.

A contract was entered into on July 15, 1914, for the construction of this building, on a lot 60 by 100 feet, situated on the corner of Main and St. Antoine streets.

The public building proper is 39½ by 45 feet, but there is a wing of two stories for the Customs Examining warehouse, which is 16 by 31 feet in size.

The outer walls are of red pressed brick on rubble masonry foundations with concrete footings, and rock-face stone work up to plinth. The plinth and all external trimmings throughout are of artificial stone. The cornices are copper.

The sloping portions of roof, including tower, are covered with asbestos shingles, the flat portion with felt and gravel.

There are basement, ground and first floors. The basement has a concrete floor and brick partitions; the ground and first floors are of hardwood, with lath and plaster walls and ceilings; there are terrazzo floors with a marble border in vestibules and public lobby; the mail entrance is a cement floor. The floors of toilet rooms are vitrified tiles with white glazed tiled walls. Birch dado in examining warehouse, kitchen and bathroom; cement dado in post office public lobby and vestibule.

The basement is used for boiler and fuel room, store room and stair hall. The ground floor is allotted to the post office and examining warehouse, and contains vestibules, lobbies, stairway and toilet. The first floor is allotted to customs long room, collector and records offices, and one unallotted office. It also contains men's and women's toilets, stairway and caretaker's quarters.

The building is heated with hot water and lighted by electricity.

Plans and specification prepared by this Department.

Contractor, Alfred Lapointe.

Clerk of Works, Joseph Forgues.

## QUEBEC.

### ALTERATIONS TO EXAMINING WAREHOUSE.

A contract was entered into on the 18th March, 1915, for supplying and installing two electric passenger elevators, a motor generator and the following alterations to the above building.

In the rear of the building, windows and a portion of the exterior wall were removed for the construction of new double entrance door.

Portions of the interior brick walls and wooden partitions on ground and first floors were removed in order to construct new doorways.

Stairs and the elevator extending from ground to first floor and situated next to boiler room were removed, also counters, counter-partitions, basins, water closet and toilet room partitions.

A shaft was cut through ground, first floor and first floor ceiling for freight elevators.

Steel lintels and beams were constructed around elevator openings, and the two electric passenger elevators and the motor generator were installed.

The building is lighted by electricity.

Plans and specifications were prepared by this department.

The A. B. C. Electric Elevator Company of Canada, Limited, Contractors.

DRILL HALL—ADDITIONS AND ALTERATIONS.

This building, which was described in the report of 1914, is still under construction. Plans and specifications prepared by this department.

Supervising architects, Stavely & Stavely.

Contractors, Jinchereau & Lalonde.

LOUISE EMBANKMENT—IMMIGRATION BUILDING.

This building, which was described in the report of 1912, is still in course of construction.

A contract was awarded June 2, 1914, for the making and finishing of interior fittings.

Contractor, Napoléon Gignac.

A contract was awarded June 24, 1914, for the construction of one additional story in the centre of the building, about four hundred feet long by the width of the structure.

Contractor, Chas. Edward Deakin.

A contract was awarded January 30, 1915, for the supply of three (3) wrought iron tubular boilers for this building.

Contractors, The Jenckes Machine Company, Limited.

POST OFFICE—ALTERATIONS AND ADDITIONS.

These works, which were described in the report of 1913, are still in progress.

Plans, etc., prepared by this department.

Resident architect, E. M. Talbot.

Contractors, Villeneuve, Bossé, Banks & Boivin.

## RICHMOND.

PUBLIC BUILDING.

All the plaster walls and ceilings on the ground floor and stair well were repaired and painted, all hardwood throughout varnished. The first floor was partially treated in like manner and new hardwood floorings laid. The plumbing system was improved. All the exterior openings and fences were generally repaired and painted.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## ROBERVAL.

PUBLIC BUILDING.

The bell and clock machinery with all necessary attachments, supplied from the manufacturers.

Preparing clock tower, installing clock dials, placing bell, wiring tower for electricity and putting lights in the dials.

Jeweller installing bell and tower clock machinery.

A picket fence has been built around the property, a distance of 357 feet.

A safe was supplied for the post office.

District Engineer, J. A. Tremblay, Montmagny, Que.

## ROCK ISLAND.

PUBLIC BUILDING.

The main drain was raised and relaid as required. Parts of the interior were kalsomined and stairs to the first floor were provided with burlap dadoes, also the main hallway and caretakers lobby entrance.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## SHAWINIGAN FALLS.

### PUBLIC BUILDING.

Portions of the ground on Fifth and Station streets and in the rear have been graded and grass planted thereon.

Concrete sidewalks and curbs have been laid around the building on Fifth and Station streets. The yard in the rear and the driveway from the streets have been concreted. Shades furnished and fitted to windows.

Plans, etc., prepared and work supervised by Asselin & Augé, architects.

Contractor, A. Durand.

## SHAWVILLE.

### PUBLIC BUILDING.

A contract was entered into on January 25, 1915, for the construction of this building on a lot 52 by 95 feet including lane, which is situated on corner of Main and Centre streets.

The building measures 33½ by 55¾ feet. The foundation walls and footings are of concrete; the exterior walls are of brick with artificial stone trimmings. Sills to doors, string courses, copings and pier caps are of white limestone with tooled surface. Rustic brick on all elevations. The cornices are covered with galvanized iron; flat roof is felt and gravel.

The floor in basement is of concrete, and the partition walls are of brick. The building is reinforced with steel beams. Tile floors in vestibule and toilet rooms, marble dodo in vestibule, wooden joists and maple floors in balance of the building.

There is a basement, ground and first floor.

The basement is used for the boiler, fuel room, storage and ash dump.

The ground floor is used for post office, lobbies, toilet room, vault and stair hall.

The first floor is used for caretaker's quarters.

The building is heated by hot water and lighted by electricity.

There is a septic tank with weeping tiles in yard.

Plans and specification prepared by Frank C. Sullivan, architect, Ottawa.

Clerk of Works, John Shaw.

Contractors, The Howard & Elliott Lumbering Co.

## SOREL.

### PUBLIC BUILDING.

All the water service piping throughout was renewed as well as some sections of the sewer pipes from the caretaker's quarters to the basement and from there to the main sewer. Many sections of the slate roofs had to be repaired and made water-tight. Hardwood floors were laid in part of the caretaker's quarters.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

A contract was entered into on May 12, 1914, for the supply and erection of post office interior fittings, which has been completed.

Plans and specification prepared by this department.

Contractor, D. Péloquin.

## STE. AGATHE DES MONTS.

### PUBLIC BUILDING.

A contract was entered into on the 24th June, 1914, for the construction of a public building.

This building is situated on a lot 75 by 100 feet at the corner of St. Vincent and St. Donat streets.

The size of the building is 56 by 39¼ feet, on concrete foundations, with damp course over footings. The facing below plinth and steps are of limestone. The contractors have erected cement artificial stone above plinth throughout. This stone was substituted for that specified, viz., grey granite or white marble.

The walls are of brick faced with buff No. 1 pressed brick. There are brick pilasters with granite capitals. Pediment and entablature are of granite.

Columns of the Tuscan order, face St. Vincent street; the parapet walls are covered with galvanized iron. The floor of porch, covered with quarry tiles; the flat roof is composed of felt and gravel.

The floors throughout are of hardwood, with terrazzo floor in lobbies, vestibules and lavatories. The steps, borders and bases are of marble.

The wooden floors are supported by steel beams and columns. The dado in post office lobby and vestibules are oak panelled; the dado in working space of post office, entrances, staircase and upper hall is made of ash. Lath and plaster finish to interior walls.

The basement has a concrete floor, and is used for furnace, fuel and store room.

On the ground floor, there is the post office, porch, vestibules, lobbies, vault and staircase hall.

On first floor are the caretaker's quarters. Lavatories on the mezzanine and first floors.

There are cement sidewalks, and a septic tank is installed at the rear.

The building is heated by hot water and lighted by electricity .

Plans and specification were prepared by Messrs. Finley & Gagnon, architects, of Montreal.

Clerk of Works, J. B. Reid.

Contractors, J. A. & R. Gron, of St. Laurent.

## ST. GABRIEL DE BRANDON.

### PUBLIC BUILDING.

This building, which was described in the report of 1914, is completed.

A contract was awarded November 18, 1914, for the supply and installation of interior post office fittings.

## ST. JEROME.

### PUBLIC BUILDING.

All the grounds about this building were graded and trees planted. Many minor repairs to the heating and water systems had to be attended to and some of the basement openings had to be renewed.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## ST. JOHNS.

### POST OFFICE.

All the exterior openings were painted or varnished. Minor repairs were generally carried out in all parts of the building.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

CUSTOM HOUSE.

All the exterior openings were painted, and repairs made to the plumbing system. Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## ST. HYACINTHE.

INLAND REVENUE.

The whole of the interior of this building was kalsomined, painted and varnished as the case required. The exterior openings, fire-escape ladder, fences and shed painted. The balcony on the rear was partly rebuilt.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

PUBLIC BUILDING.

All the exterior openings, iron fire escape ladder and woodwork generally were painted. An iron fence was erected about this property.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

## ST. LAMBERT.

PUBLIC BUILDING.

The interior and exterior woodwork, etc., has been painted, hardwood floors and stair treads oiled and shellaced, also two electric light standards erected on each side of the main entrance.

Plans, etc., prepared by this department.

Contractor, Eugène Patenaude.

## ST. LAURENT.

PUBLIC BUILDING.

This building was fully described in the report of 1914, is completed. Since then, a clock tower has been added, post office interior fittings installed, concrete walks laid, grading and sodding done and an iron fence erected.

Plans and specification prepared and work supervised by Jos. Sawyer, architect.

Contractors, J. A. & R. Grou.

## ST. THERESE.

PUBLIC BUILDING.

This building, which was described in the report of 1913, is completed.

Plans and specifications prepared by this department.

Clerk of Works, Hector Lebœuf.

Contractors, Jos. Lafond & O. B. Lafleur & Fils.

A contract was awarded 11th September, 1914, for the supply and installation of interior post office fittings.

## TERREBONNE.

PUBLIC BUILDING.

All the exterior woodwork, fences, etc., were repaired and repainted. The heating system was added to and many other minor repairs of moment were attended to.

Work supervised by G. S. Gingras, Clerk of Works, Montreal.

Contractor, R. A. Sproule, Ottawa.

### THREE RIVERS.

PUBLIC BUILDING.

This building, which was described in the report of 1914, is still in course of construction.

Plans and specifications prepared by this department.

Supervising architect, Charles Lafond.

Contractors, Verrette, Macleod & Ferron.

## PROVINCE OF ONTARIO.

### ACTON.

PUBLIC BUILDING.

A description of the construction of this building appeared in the report of 1914, the building is completed.

Interior post office fittings have been installed by the Berlin Interior Hardwood Company.

Cement sidewalks were constructed around the building.

Work supervised by T. A. Hastings, Clerk of Works, Toronto, Ont.

### ALMONTE.

PUBLIC BUILDING ADDITION.

A contract was entered into on October 23, 1914, for alterations and additions to this building, situated at the corner of Little Bridge and Mill streets.

The one story addition of bay window form, consists of an extension to the working part of the post office, connected by a wide opening, a mail entrance and porch in size 19 feet by 20 feet, with a basement for caretaker's storage. A new outside entrance was made into the customs examining warehouse, provided with concrete steps. The concrete basement walls are faced with stone to plinth level. Walls from cornice to plinth of red brick to match the present building. Ground floor joists, ceiling joists, roof timbers and stud partitions are of wood; galvanized iron roof covering, double floors wood; part of mail entrance has terrazzo floor, and the walls and ceilings are of lath and plaster.

The present system of hot water heating was extended to provide for the additional radiation.

Lighting is by electricity.

Plans and specifications prepared by this department.

Clerk of works, A. C. Gilmour.

Contractors, J. Bradford and H. V. Serson.

A contract was entered into December 28, 1914, for electric wiring and fittings for the entire building.

Contractors, Crooks Electric Supply Company.

### AMHERSTBURG.

PUBLIC BUILDING.

Repairs made to windows, including painting and glazing; door checks furnished; the woodwork of caretaker's kitchen was painted, and repairs were executed to the external brickwork.

Work supervised by T. A. Hastings, Clerk of Works, Toronto, Ont.

## AURORA.

### PUBLIC BUILDING.

A contract was entered into May 18, 1914, for the construction of this building, on east side of Yonge street. The size is 50 feet by 56 feet, with basement, ground and first floors.

The footings to walls and steel columns are of concrete, foundation walls stone, with three feet exterior stone wall, concrete platform at rear for mail and customs entrance, the rest of the walls of brick with stone trimmings, flat roof, felt, tar and gravel, tower roof galvanized iron with finial. The clock tower is situated on the southwest corner of building, the bell chamber and dial room are above the level of roof parapet.

The interior constructional materials are steel columns encased in concrete, steel beams supporting wooden floor and roof joists, terrazzo floors in post office public lobby, vestibule and lavatories, except on the first floor bed rooms and floors of tower which are spruce, the remaining floors are of birch; ceilings and walls metal lathed and plastered; moulded plaster cornice to walls and beams on ceiling ornament the front portion of post office.

The basement contains furnace, storage and fuel rooms, vault and stairs to ground floor with side entrance off the midway landing.

Ground floor is assigned to vestibules, post office, public lobby, mail lobby, working space with vault, customs examining warehouse and toilet room.

The first floor contains three offices and toilet room, five living rooms and bath room for the caretaker's quarters.

Heating is by hot water, lighting by electricity.

Plans and specifications prepared by this department.

Clerk of works, H. Coffey.

Contractors, W. T. Bath, W. E. Anderson and D. A. Patchell, Midland, Ont.

A contract was entered into February 15, 1915, for alterations and additions to the public building, consisting of two small wings, each 19 feet by 20 feet, on the first floor level, one wing to provide customs offices and customs long room, adjoining the stairway, and the other to enlarge the caretaker's living quarters and make the rear appearance of the building symmetrical. A flat roof of uniform height covers the entire building.

Off the kitchen is a pantry, linen closet from hall and clothes closets to bed rooms.

The flat felt, tar and gravel roof at the first floor level, next kitchen, is available for drying of clothes.

Contractors: Messrs. Bath, Anderson and Patchell, Midland, Ont.

## AYLMER.

### PUBLIC BUILDING.

This building which was described in the report of 1914, is completed.

Plans and specifications prepared by this department.

Resident architect, Thos. Webster.

Contractors, Nagle & Mills.

Additional electric lights were installed on the post office screen and sorting cases.

Window blinds provided for all openings.

Furniture supplied for postmaster.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## BARRIE.

### PUBLIC BUILDING.

The town of Barrie furnished labour and material in executing work on the post office grounds.

The department furnished tiles in laying tile floor; repaired plastering and changing plumbing in caretaker's quarters.

A tower clock and bell of English manufacture, was installed in the turret.

A tower with dial room, bell chamber and machinery room was constructed for the installation of the tower clock on the main roof of building.

The interior of building was painted and decorated.

In two halls, linoleum was furnished and laid.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

### DRILL HALL.

A contract was entered into on August 20, 1914, for the construction of this drill hall.

It is 177 feet long by 85 feet 6 inches, and is situated on a lot surrounded by High, Park and Small streets.

The construction is of brick, with stone trimmings on concrete foundation, and with stone facing above grade.

The building contains basement, ground and first floors, and second and third floors in the towers only.

The basement provides for shooting gallery, furnace rooms, store rooms and lavatories.

The ground floor contains drill hall which measures 101½ feet by 80 feet, also armouries and store rooms.

The first floor contains officers', sergeants' and men's rooms.

The main hall is finished in pressed brick with hardwood floor.

Ground, first, second and third floors have lath and plaster finish.

The building is heated by hot water.

Drawings and specification prepared by the Department of Public Works, in accordance with the Militia standard drawings.

Contractors, The W. A. Tom Construction Co., Collingwood.

Clerk of Works, J. J. Marks, Barrie, Ont.

## BELLEVILLE.

### PUBLIC BUILDING

In the post office public lobby, a pyrofugont floor was laid. Two pairs of outside entrance doors were made.

New post office boxes, drawers and fittings supplied and erected and electrical work in connection with the fittings executed.

Repairing old and supplying new fixtures for gas and electric lights.

Provided a bedroom for the night clerk of post office, the plaster was repaired, and a glazed screen constructed.

The interior of the post office, on the ground floor, was painted, also storm doors painted.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## BERLIN.

### PUBLIC BUILDING.

Repairing old floors.

Fitting up room in G.T.R. station in connection with the removal of Gas Inspection and Custom Department from ground floor of the post office.

Alterations to ground floor of post office.

Changing plumbing and installing gas machine.

Wiring sorting cases in post office.

Installing electric lights in new examining warehouse on Queen street.

New counter and table, and moving bins into new examining warehouse.

Alterations to screen for parcel post.

Supplying four basket trucks.

Work done under supervision of Thos. A. Hastings, Clerk of Works, Toronto.

### CUSTOMS EXAMINING-WAREHOUSE, QUEEN STREET SOUTH (RENTED PREMISES).

Installing electric lights in the new examining warehouse.

Work done under supervision of Thos. A. Hastings, Clerk of Works, Toronto.

## BOWMANVILLE.

### PUBLIC BUILDING.

Repairs to plumbing fixture and seat.

Painting and decorating the building.

Work done under supervision of Thos. A. Hastings, Clerk of Works, Toronto.

## BRACEBRIDGE.

### PUBLIC BUILDING.

The construction of this building, which was described in the report of 1914 is completed.

Tower clock and bell with all the necessary accessories supplied to the public building.

Labour and material, carpenters' and blacksmiths' work and hardware, preparing clock tower, installing clock dials, putting in two ceilings, erecting and placing bell, wiring tower and lighting clock faces and painting woodwork.

Jeweller installing tower clock machinery and bell.

Bag rack, boxes and drawers for post office screen.

Making and installing interior fittings, additional flooring, vault fittings, etc.

Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

## BRAMPTON.

### POST OFFICE.

Repairing brickwork of chimney.

Setting up flag pole in new position.

Boring steel and carrying up stone corners of tower, also lifting bell for tower clock.

Wiring tower and lighting clock faces.

Jeweller installing tower clock, machinery and bell.

Repairing galvanized iron roof of post office.
New plumbing and additional heating in rear addition.
Kalsomining, painting and gilt lettering in post office.
Repairing sorting cases.
New blinds and awnings for building.
Drawers and boxes for post office screen.
Making and installing interior post office fittings.
Contractor for clock tower, Thos. A. McClure.
Clerk of Works, J. G. Sewell.
Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

## BRANTFORD.

### OLD PUBLIC BUILDING.

Repairing plumbing and heating.
Changing electric light in customs office.
Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

### NEW PUBLIC BUILDING.

A description of this building appeared in the report of 1913, the work is still in process of construction.

A contract was entered into on December 15, 1914, for the supply and installation of one electric passenger elevator and a motor generator set.

A contract was signed December 28, 1914, for making and installing post office and customs fittings.

Supplying four basket trucks and one bag rack for post office.

Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

## BURFORD.

### PUBLIC BUILDING.

A contract was entered into November 9, 1914, for the construction of this building, on a site situated on the north side of King street.

The building measures 50 feet on frontage by 36 feet deep and consists of basement, ground and first floors with tower.

The foundations are of stone, laid on footings for walls and steel columns of concrete. Stonework above grade line to plinth course is random coursed rock-faced work. Exterior walls above plinth course are of brick with cut stone courses, entrance doors and trimmings in limestone. Entrance steps, platforms and buttresses limestone.

The sloping portions of main and tower roofs are of clear quality blue slate. Deck or flat portion of main roof galvanized iron.

Drainage is to a septic tank in garden, with percolating tiles.

The interior wooden construction of joists, partitions and roof timbers are supported by steel columns and steel beams. The walls and ceilings lathed with expanded metal and plastered. The beams and ceilings of ground floor are ornamented by moulded plaster cornices.

The vestibules, post office public lobby and toilets laid with terrazzo floor. Mail entrance lobby in cement floor. Hardwood floors in post office working space, and offices on first floor. The floors of bedrooms and floors of tower of spruce.

The basement is divided into stair hall, storage room, furnace and fuel rooms, vault foundation and space for pneumatic tank in connection with the water supply to plumbing fixtures; stairs lead to ground floor. A side grade entrance door is provided on the midway landing for caretaker's use.

The ground floor contains vestibules, post office, public lobby and working space, with brick vault, men's and ladies' toilet, mail lobby and staircase hall with access to first floor.

The first floor has one large unallotted office and a suite of living rooms for caretaker, comprising living and dining rooms, kitchen with communicating pantry, two bed-rooms with clothes closets, linen closet and bathroom. All rooms open onto a private hall. A tower on the southwest corner of building is carried above the level of the deck roof in which is bell chamber and dial room. The interior is sheeted, a weight box built and ready for the installation of tower clock machinery and bell.

Heating is by hot water. Lighting by electricity.

Plans and specifications prepared by this department.

Clerk of works, Geo. W. Hall, architect, Brantford, Ont.

Contractors, P. H. Secord & Sons, Limited, Brantford, Ont.

## CARLETON PLACE.

### PUBLIC BUILDING.

The following repairs were made to the public building: Iron fence and gate between adjoining building and post office; construction of concrete platform to mail entrance at rear; upper part of chimney removed and rebuilt to increased height; new dormer window inserted in caretaker's living quarters; wooden partitions put up in lavatories; new ladies' toilet on ground floor, men's toilet in basement, Customs toilet on first floor and caretaker's bathrooms on second floor supplied with complete modern plumbing; conduit piping, electric wiring and the fixtures throughout building.

Steel beam placed under basement ceiling to support the joists of ground floor; in the public lobby of post office and toilet rooms pyrofugont floors were laid.

The manufacturer supplied a bell and tower clock movement; carpenter preparing clock tower and jeweller installing mechanism.

The interior of the building was kalsomined and painted. A contract was awarded November 11, 1914, for the making, finishing and erection of interior post office fittings. Post office boxes, drawers, brass plates and grilles were supplied.

Work supervised by D. J. Mullarkey, Clerk of Works, of this branch.

## CHATHAM.

### PUBLIC BUILDING.

Sowing grass seed on lawns and planting trees.

Pointing stonework and dressing stone steps.

General repairs to doors, windows, roof, floor and furniture, also securing bag rack to floor.

Cleaning out waste pipe, repairing water pipes, and putting in new piping for hot water heater.

Additional electric lights installed over sorting cases in post office.

Painting, papering and reglazing works were executed.

Supplying four basket trucks, and ten new rubber tires for bag rack.

Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

## CHESLEY.

### PUBLIC BUILDING.

Building gravel roadway and cement sidewalks around post office building.

Tower clock and bell with all necessary accessories supplied to public building from the manufacturer.

Labour and materials preparing clock tower, installing clock dials, erecting belfry canopy, hoisting and placing bell, wiring tower for electricity and lighting clock faces.

Jeweller installing tower clock machinery and bell.

Furnishing and fixing two door checks.

Work done under supervision of T. A. Hastings, Clerk of Works, Toronto.

## CLINTON.

### PUBLIC BUILDING.

Tower clock and bell with all necessary accessories supplied from the manufacturer.

Cork matting was laid in the Customs office.

Work done under the supervision of Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## COBOURG.

### PUBLIC BUILDING.

The town of Cobourg built concrete curb and gutter on street.

Clerk of Works, Thos. A. Hastings, Toronto, Ont.

## COLLINGWOOD.

### PUBLIC BUILDING.

The construction of this building which was described in last year's report is completed.

## CORNWALL.

### PUBLIC BUILDING.

A contract was entered into January 15, 1915, for the installation of electric light wiring and fittings to the entire building.

Contractor, W. R. McCallum.

## DESERONTO.

### PUBLIC BUILDING

Rebushing the surface of entrance steps, repointing the stonework.

Repairing present and putting down new concrete sidewalks.

Repairing the felt-tar and gravel roof and the ironwork on the dormer windows and the clock tower.

Painting exterior wood and ironwork and reglazing nearly all the windows, especially the lower sashes.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## DRESDEN.

PUBLIC BUILDING.

The bell and tower clock with all necessary accessories had been supplied from the manufacturer.

Labour and material, carpenter and blacksmith's work, etc., preparing the clock tower, installing clock dials, erecting bell canopy, hoisting and placing bell, wiring tower for electricity and lighting clock faces.

Jeweller installing tower clock machinery.

Putting up iron railing at postal receiver; furnishing and fitting four door checks; painting and glazing works in building and supplying safe for post office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## DUNDAS.

PUBLIC BUILDING.

Alterations to, and fitting up caretaker's quarters; erecting ladies' cloak room; seeding the grounds; electric light wiring for new lights and electric light standards for post office.

New awnings complete were placed on windows.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## EGANVILLE.

PUBLIC BUILDING.

The construction of this building, which was described in last year's report, is still in progress.

An independent water main and water service was laid from the river to the building to supply water for flushing the plumbing fixtures.

To furnish fresh drinking water, a well was drilled and a pump installed.

A private drain from the public building to the river through the rear portion of the property of Mr. Alexander Mills was constructed. To remove surface water from the yard, a catch basin was built and connected with drain.

Cement mortar was used in place of lime mortar specified.

Additional land was purchased in rear of the original site in area 99 feet wide by 62½ feet deep.

The concrete retaining walls enclosing three sides of the property was moved back into the hill, the earth and rock were excavated to increase the space for a yard in rear of the building. The walls of the tower were raised seven feet in height to elevate the dials above the deck roof level.

A safe for the post office was supplied.

A contract was awarded February 4, 1915, for the construction and completion of interior post office fittings.

## ELMIRA.

PUBLIC BUILDING.

A description of the construction of this building appeared in last year's report, the work is still in progress.

Plans and specifications prepared by this department.

Clerk of Works, J. H. E. Bowman.

Contractor, E. A. Bleakney.

The bell and tower clock with all necessary accessories have been supplied by the manufacturer but not installed.

## ELORA.

PUBLIC BUILDING.

Supplying and installing one motor for pump. Putting water system in good working order.

## ESSEX.

PUBLIC BUILDING.

The grounds and lawns were graded and sown with grass seed.

Repairs made to vestibule doors, etc. Carpenter work and material, preparing clock tower, installing clock dials, building belfry, hoisting and placing bell.

Jeweller installing tower clock machinery and bell. Supply of small hardware, glass, hose pipe for watering lawn and repairs to pump.

Furniture for Customs office, and one office clock provided.

Furnishing gas burners and electric lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## EXETER.

PUBLIC BUILDING.

Filling in cellar and erection of fencing along sidewalk on site of public building.

## FERGUS.

PUBLIC BUILDING.

Supplying and installing one motor for pump. Putting water system in good working order.

Installing two electric lights in attic.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## FORT WILLIAM.

CUSTOMS EXAMINING WAREHOUSE.

A description of the construction of this building appeared in the report of last year, the work is still in progress.

Plans and specifications prepared by this department.

Resident Architect, J. C. Stinson.

Contractor, M. H. Braden.

PUBLIC BUILDING.

Repairing plaster work and tinting kitchen in caretaker's quarters.

Supplying four basket trucks for post office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## GALT.

PUBLIC BUILDING.

The bell and tower clock with all necessary accessories supplied from the manufacturer.

Carpenter, blacksmith and stonecutters' work preparing clock tower, installing clock dials, building belfry, placing bell and wiring tower for electricity and lighting clock faces. Jeweller installing bell and tower clock machinery. Wiring tower for electricity and putting lights in dials.

Supplying glass and repairing clock dial, and painting clock room.

Installing auxiliary gas piping and lights in post office. Repairing plaster work, and painting caretaker's living quarters.

Supplying four basket trucks.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

DRILL HALL.

A contract was entered into on June 17, 1914, for the construction of the above work.

This building, 179 by 89 feet, is situated on Mill street.

It is of brick construction, with cut stone trimmings, and has a concrete foundation with stone facing above the grade.

There are basement, ground and first floors.

The basement contains bowling alleys, shooting gallery, store rooms, furnace and fuel rooms and lavatory.

The ground floor contains main hall (size 102 by 79 feet), armouries, quartermaster's stores and offices.

The first floor contains officers', sergeants' and men's assembly rooms and lavatories.

The main hall is finished in brick, and rooms on ground and first floors with lath and plaster.

The building is heated by hot water.

Plans and specifications prepared by this Department.

Contractors, P. H. Secord & Sons, Brantford.

Clerk of Works, George H. Thomas.

## GANANOQUE.

PUBLIC BUILDING.

Supplying tungsten lamps for the building.

## GLENCOE.

PUBLIC BUILDING.

Erecting three tie posts. Cleaning and decorating the interior of the building.

## GODERICH.

PUBLIC BUILDING.

Supplying and laying one Brussels rug and cork linoleum for Customs offices.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## GRIMSBY.

PUBLIC BUILDING.

This building which was described in the report of last year is completed.

The bell and tower clock, with all necessary accessories, supplied from manufacturer. Carpenter work and material preparing clock tower, installing clock dials,

removing louvres and putting in six window sash, hoisting and placing bell, wiring tower for electricity and lighting clock faces, jeweller installing bell and tower clock machinery.

Post office boxes, drawers and brass grilles were supplied.

A contract was awarded August 21, 1914, for the making and erection complete of interior post office fittings.

Electrical wiring for screen in post office.

Putting up dressed wooden partition to form bin for kitchen coal.

Installation of a reducing valve on water service in basement.

Cast iron coal chute frame and cover placed in platform to mail entrance for the removal of ashes. Four wrought iron railings with standards to the two main entrances for protection against accident.

Regrading gutter to examining warehouse and altering down pipe to east side and connect with a new six inch drain to main street. Placing a wrought iron handrail from ground to first floor on main stairway.

Erecting new fence around property. Cutting stone to fit brass postal street receiver.

Providing four door checks for vestibules. Making new top for standing desk.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## GUELPH.

### PUBLIC BUILDING.

General repairs were made to plumbing, gas mains, etc., and electric wiring.

Cleaning the walls and ceilings and decorating the building; papering kitchen and painting balcony; painting street letter boxes; alterations for parcel post and stamp vendors wickets in the post office screen; supplying two sections and six corner slips for the bag rack.

Repairing clock, furnishing two window shades and four basket trucks for post office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## HAMILTON.

### PUBLIC BUILDING.

Pointing and repairing stonework and concrete floor in basement post office section; alterations in basement for sorters and carriers, making chute from ground floor to basement, new platform in yard, repairing window sash and providing two area gratings.

Making special case and twenty pigeon-hole oak case, for basement.

Carpenter work in immigration office; repairing tile floor and roof.

Installing new plumbing in caretaker's quarters and new heating in basement. Electric wiring in the registration department and the basement for sorters. Installing speaking tube and three electric fans. Auxiliary wiring for Christmas business.

Extending the freight elevator and installing electric call bells and buttons.

Painting and redecorating the interior of the immigration office. Painting caretaker's quarters, gas and electric inspection office, weights and measures office, and washing off desks in the latter offices. Painting exterior of post office building; painting street letter boxes. Making two drawers for stamp vendor, changing partitions in post office and making one sorting bin. Supplying fifty-eight lockers and post office box glasses, four trucks, two bag racks and six basket trucks.

Making and erecting pigeon-holes, custom house section; connecting heating apparatus with immigration office. Repairs to electric lights.

Furnishing and fitting sixteen window blinds.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "B."

Frosting windows and re-lettering same.
Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## HANOVER.

PUBLIC BUILDING.

A description of the construction of this building appeared in the report of last year; work is still in progress.

A brick vault was built in the basement and ground floors and provided with steel doors.

Painting two street letter boxes.

## HARRISTON.

PUBLIC BUILDING.

Alterations to armoury and cement walks. Repairing door checks, supplying two new springs and tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## INGERSOLL.

PUBLIC BUILDING—ADDITIONS AND ALTERATIONS.

A description of this building appeared in the report of last year, the building is completed.

Post office letter boxes, drawers and brass grilles were supplied.

A contract was awarded November 21, 1914, for the making, erecting and finishing of interior post office fittings. A hardwood mantle with tile hearth and facing was set up in postmaster's office.

A jacket heater and hot water tank in the basement adjoining the heating boilers was installed to provide hot water for caretaker.

Three clothes closets and two kitchen cupboards made from roof space. A square of flooring was laid on ceiling joists, and one electric light with switch supplied. New flag pole complete erected on deck roof.

Two cylinder locks put on the rear doors of post-office for safety.

The dial room strapped and sheathed with inch material and painted, and clock machinery overhauled and cleaned by the jeweller.

New floor laid in caretaker's bath room and new bath and basin fixtures installed, each supplied with hot and cold water. Slop sink erected on first floor lavatory, in place of basin removed.

Three rooms in caretaker's quarters were papered.

TEMPORARY POST OFFICE QUARTERS—OLD IMPERIAL BANK BUILDING—RENTED PREMISES.

Moving post office and fixtures into the temporary premises.

Removing electric fixtures. Pointing brickwork on old building.

## KEMPTVILLE.

PUBLIC BUILDING.

A description of the construction of this building appeared in the report of 1913, the building is completed.

Supplying bag rack and post office boxes and drawers.

A contract was awarded June 12, 1914, for the making and finishing of the interior post office fittings.

A fire broke out in the general store on the north, adjoining the government property, and did slight damage to the roof and the interior on upper floor of the public building. The work of restoration has been completed.

## KENORA.

### PUBLIC BUILDING.

Building belfry and general carpentry work in connection with setting up of the tower clock, machinery and bell; furnishing wire cable and small hardware. Jeweller installing bell and clock mechanism. Wiring tower for electricity and putting lights in dials.

Supplying and erecting two revolving doors for the post office.

Building fence, clock stand and partition. Cleaning, decorating and painting interior of post office.

Repairing and putting new locks on post office boxes.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## KINCARDINE.

### PUBLIC BUILDING.

A steel fire escape was erected for egress from all floors of the building.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## KINGSTON.

### CUSTOM HOUSE.

The construction of new lavatories, etc,; placing a double window under the skylight in the roof of the examining warehouse to prevent draughts; repairs to plaster, cleaning and painting; beautifying of grounds between the customs and post office buildings.

Work supervised by Power & Son, Architects, Kingston.

### CUSTOM HOUSE—RENTED BUILDING.

In the Inland Revenue office, a ceiling sash was made to the skylights. Inland Revenue office floors covered with matting.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

### POST OFFICE.

A corrugated iron ceiling was placed in the furnace room, the door frames and doors covered with tin and placed at entrance to furnace room.

A porch was built and completed over the entrance. Completion of walks and a light wire fence between grounds of post office and customs house. The grading, cleaning and beautifying of the remaining grounds around these buildings.

A portion of the basement was excavated for store room, concrete floor, new door for removal of ashes with trolley to same, painting, kalsomining, cleaning, etc.

Supplying furniture, parcel post sorting case, pigeon-hole case, wicket and oak table.

Work supervised by Power & Son, architects, Kingston, Ont.

ROYAL MILITARY COLLEGE DORMITORY.

A description of this building appeared in the report of 1914, the building is completed.

Additional work required to above building is as follows: Extra heating boiler; two iron fire-escapes on each end of building, placed nine feet above ground level to the corridor window on the top floor; door card holders and door numbers; shelving and arms racks; enclosing pipes in clothes closets; rifle racks; clothes cupboards in quartermaster's stores, etc., and guard bars to windows; roller towel-racks in all bed rooms and bath rooms, and covering cold water pipes in the store rooms in basement.

## LAKEFIELD.

PUBLIC BUILDING.

A description of the construction of this building appeared in the report of last year, the building is completed.

The bell and tower clock machinery with all necessary accessories were supplied to the public building from the manufacturer.

## LEAMINGTON.

PUBLIC BUILDING.

Supplying and putting in position boards to cover the outside stone entrance steps to protect pedestrians. Erecting clothes closet and repairing vestibule doors; painting two rooms; supplying post office with one bag rack, and building with tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## LINDSAY.

PUBLIC BUILDING—ALTERATIONS AND ADDITIONS.

For the erection of improvements to this building, a contract was entered into on April 6, 1914. The site is in rear of the present building. The addition is 45 feet deep by the width of the present structure, 56 feet, with wing 22 feet 6 inches by 13 feet, and consists of one story and basement.

The foundations are of stone on footings of concrete for walls and column foundations. The remaining walls of brick with stone trimmings similar to present building, and stone coping all round, with galvanized iron cornice. A portion of the present rear wall on ground floor was removed and the upper part of structure carried on steel beams. Working space of post-office is lighted by two large skylights with ventilators.

The tower was removed down to a level below deck roof line and rebuilt, providing additional elevation for the clock dials and belfry under roof and furnishing rooms for clock and dial machinery.

The basement is entirely excavated and is devoted to storage.

The ground floor provides additional working space to post-office, mail lobby, external mail platform, men's toilet room, armoury 20 by 12 feet, weights and measures office 12 by 12 feet.

Customs examining warehouse 19 by 24 feet 6 inches with communicating corridor and side entrance.

Interior construction is steel columns on concrete footings, supporting steel beams and wooden floor, ceiling and roof joists, wood flooring, metal lath, plaster walls, ceilings and plaster window trim; doors and dado of wood. The mail lobby is

floored with cement; terrazzo floors in public lobby and toilet rooms. The roof is flat and covered with felt, tar and gravel.

A new galvanized iron roof is provided for the main part of building.

The heating is by hot water system and the lighting of entire building by electricity.

Plans and specifications prepared by this department.

Clerk of works, R. H. Bell.

Contractor, James Bogue, Peterborough, Ont.

The construction was completed during the fiscal year.

Work in connection with construction of new concrete roadway and repairing fences; supplying and installing snow guards, removing and replacing radiators; repairing and connecting electric bells; plastering the clock room; patching and placing one marble step and painting the old section of the building.

A contract was awarded October 28, 1914, for the making, erecting and finishing of post-office interior fittings.

Supplying one special bag rack and post-office letter boxes.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## LISTOWELL.

### DRILL HALL.

A contract was entered into on July 30, 1914, for the construction of this building.

It is situated on the corner of Main and Tremain streets, and is constructed of brick on concrete foundation.

This building, which is 106½ by 62 feet, contains basement, ground and first floors.

The basement is allotted to furnace, fuel room, store rooms and shooting gallery.

The ground floor contains drill hall, 78 by 59 feet, armouries and lavatory.

The first floor provides for officers', sergeants' and men's rooms.

The main hall is finished in brick; remaining portions of ground and first floor lath and plaster.

The building is heated with hot air.

Plans and specification prepared by the late John Bamford, architect, of Listowel.

Contractors, The W. A. Tom Construction Co., Collingwood.

Clerk of Works, John D. Philip.

### PUBLIC BUILDING.

Erecting a rural mail shelter and outside porch.

New concrete floor and cement walk. Cleaning and varnishing outside doors, and supplying tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## LONDON.

### CUSTOM HOUSE.

Repairing basement windows, making cabinet and general repairs.

New plumbing on first floor, and extra electric lights and electrical work.

Repairing heating boilers and sheet metal of roof; restoring area railing; graining and papering large room.

Supplying and laying linoleum for the examining warehouse; one clock for Gas Inspection Department, and filing cabinets.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POST OFFICE.

Cutting entrance from post office building to Carling Block.

Climbing flag pole and placing new rope; repairing trucks; supplying small hardware and one set rubber strips for revolving doors.

Removing radiators and installing additional heating, also putting in new closet tank; extending gas pipes in basement and supplying one light at stamp vendor's wicket.

Cleaning, frosting and re-glazing windows, painting and decorating the interior.

Alterations and additions to bag rack and furnishing three dozens post office box glasses.

Supplying new shades for skylight, four wire basket trucks and six basket trucks for post office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## MARKHAM.

PUBLIC BUILDING.

Grading the post office grounds and sowing grass seed.

Erecting new fence, moving outside closet, repairs in post office and making new walk.

Supplying two door cheeks, one hank of sash cord, and linoleum for wicket.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## MIDLAND.

PUBLIC BUILDING.

The construction of this building described in the report of 1914, is completed.

Building sidewalks on the property, grading grounds and sodding lawns.

The bell and tower clock machinery with all attachments were supplied from the manufacturer. Carpenter, blacksmith and painters material and labour preparing clock tower, installing dials, erecting and placing bell, wiring tower for electricity and placing lights in the dials. Jeweller, installing bell and tower clock machinery in working order.

Changing one electric switch, installing electric lights around postmaster's office, and supplying tungsten lamps.

Post office boxes, drawers and brass grilles, and bag rack were supplied. Making one table for Customs office, supplying one hat tree and two stools.

A contract was awarded June 19, 1914, for the making, placing and finishing of interior post office, customs and inland revenue fittings, and standing desk in public lobby of post office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## MILDMAY.

PUBLIC BUILDING.

Erecting an outside shed. Electric light wiring and supplying tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## MILTON.

PUBLIC BUILDING.

A contract was awarded June 18, 1914, for the construction of a public building on a site 180 feet 3 inches by 100 feet 5 inches, situated on the northeast corner of Main and Martin streets.

The building is 50 feet frontage by 36 feet deep, with a one story annex 22 by 12 feet, consisting of basement, ground and first floors, and clock tower.

The footings are of concrete for walls and steel columns, grey limestone foundation walls to plinth, and red pressed brick to top of building with Credit Valley cut stone entrance doors and trimmings.

The sloping portions of tower and main roof are of wood covered with galvanized iron. The deck on main roof and flat roof of annex are felt, tar and gravel. A skylight gives light to the internal hall of caretaker's quarters.

The interior is supported by steel columns encased in concrete and steel beams with wooden joists, stud partitions and roof timbers.

Concrete floors laid in the basement and mail lobby, terrazzo floor in public lobby and toilets on ground floor. Remaining floors, including halls, kitchen and bathroom on the first floor hardwood; balance of first floor spruce. Walls and ceilings of metal lath and plaster; ground floor ceiling finished with plaster cornice.

Basement is used for furnace and storage, stairs lead up to ground floor which is divided into post office working space and public lobby, vestibule, main entrance, mail lobby and toilet rooms.

The first floor is allotted for living quarters to caretaker

The tower is prepared for the installation of the bell and clock machinery.

Heating is by hot water, and lighting by electricity.

Plans prepared by this department.

Clerk of works, R. L. Hemstreet.

Contractor, Sam. Henson, Milton, Ont.

## MILVERTON.

### PUBLIC BUILDING.

The construction of this building, a description of which appeared in the report of 1914, is still in progress.

## MITCHELL.

### PUBLIC BUILDING.

Painting room and belfry.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## MOUNT FOREST.

### PUBLIC BUILDING.

Repairing stone steps at the main entrance and supplying and laying gravel on driveway.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## NAPANEE.

### DRILL HALL.

A contract was entered into on July 22, 1914, for the construction of this building, situated on a lot facing Centre street, between Bridge and Dundas streets.

This building, which is 210 by 84 feet, is built of brick with stone trimming on concrete foundation; foundations faced with stone above grade, and contains basement, ground and first floor, with second floor in towers.

The basement space is allotted for shooting gallery, furnace room and lavatory.

Ground floor contains drill hall 80 by 127 feet, armouries and store rooms.

First floor provides for officers', sergeants' and men's rooms and lavatories.

The interior of main hall is finished in brick; other rooms on ground and first floors, lath and plastered.

The building is heated by steam.

Plans and specification prepared by the Department of Militia and Defence. Contract awarded by this department.

The Contractor is A. S. Allaster, of Brockville.

Clerk of Works, William H. Boyle, Napanee.

PUBLIC BUILDING.

Building a new fence around property; supplying floor tile and laying same in two vestibules; executing small repairs; installing new plumbing work and fixtures; painting and decorating the entire building, and furnishing blinds and linoleum.

## NEWMARKET.

PUBLIC BUILDING.

A contract was awarded April 21, 1914, for the construction of this building, which is situated on the southwest corner of Main and Park streets.

The size of the building is 43 feet facing Park street by 56 feet on Main street, consisting of basement, ground and first floors and tower, with a one story extension irregular in shape, 21 feet by 43 feet.

The foundations and steel columns rest on concrete footings; external walls are concrete, faced with stone from grade line to plinth and brick walls to top of building with stone trimmings. Main and tower roofs are of wood with galvanized iron covering and flat top, has felt, tar and gravel roofing; there are skylights in roofs to light internal spaces; interior steel columns and beams furred, wooden partitions and joists, lath and plastered walls, basement concrete floor; birch flooring on ground and first floors; spruce flooring in bedrooms and tower; vestibules, post office public lobby and toilets have terrazzo flooring with marble border.

Basement is used for furnace, fuel and storage rooms. Stairs leading up to ground floor which is divided off for post office public lobby and working space, mail lobby, vestibule, main entrance, stair hall, vault, examining warehouse, gas and electricity inspector and a toilet.

First floor is used as customs collector's office, long-room and record room, with corridor communicating to stair hall, ladies toilet and caretaker's living quarters. On the corner, a clock tower with four dials and bell chamber surmounts the main roof.

The building is heated by hot water and lighted by electricity.

Plans and specifications prepared by this department.

Work supervised by Frank Stewart, Clerk of Works.

Contractors, P. H. Secord & Sons, Limited, Brantford, Ont.

Post office boxes, drawers, brass grilles, receivers and bag rack were supplied.

A contract was awarded January 6, 1915, for the supply and installation of post office and customs interior fittings.

## NIAGARA FALLS.

PUBLIC BUILDING.

New wash basin put in; repairing roof and one radiator; plastering in custom lhouse; installing new switch and electric light; painting customs offices and halls; and furnishing window shades, one office stool and four basket trucks.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## NORTH BAY.

PUBLIC BUILDING.

Work of blasting out rock, repairing sidewalks, installing jacket heater and hot water boiler, changing lights over boxes, and installing lights in the office of the railway mail service; painting work in post office, hall of armoury, post office inspector's and railway mail offices.

Fitting up shelving, etc., in railway mail service offices; supplying post office boxes; alterations to screen in post office, and repairing floor.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## NORWICH.

PUBLIC BUILDING.

A contract was entered into July 2, 1914, for the construction of this building, the site of which is on the northeast corner of Main and John streets.

The size of the building is 52 feet front by 36 feet deep for the main part, and 27 feet wide by 21 feet 6 inches for the extension, and of a uniform height of two stories, consisting of a basement, ground and first floors.

The footings for walls, steel columns and vault are of concrete; foundation and basement walls of stone, and external walls between grade and plinth of random coursed rock-faced stone work.

Walls above plinth to cornice and tower are red brick with cut stone trimmings. Roof, flat portion, of felt, tar and gravel; a skylight gives light to roof space and caretaker's bathroom, sloping portion including roof of tower, galvanized iron. The main entrance steps, platforms and parapets of cut stone. The mail entrance and customs platforms and steps are built on concrete walls with a reinforced top.

The interior wooden joists, roof timbers and stud partitions are carried on steel columns encased in concrete and steel beams; basement floor concrete; front entrance vestibules, stair hall, post office public lobby and toilets on ground and first floors laid in terrazzo. Other floors hardwood, except bedrooms in the caretaker's quarters and floors of tower which are of spruce. Walls and ceilings of metal lath and plaster; ground floor ceiling finished with plaster cornice. The basement is divided into stairway hall, storage rooms, furnace and fuel rooms, a stair leads up to a side entrance on the platform midway to ground floor. The ground floor is assigned for two front entrance vestibules, post office public lobby and working space with vault; rural mail delivery department and men's toilet off the mail lobby, public toilet adjoining stair hall, and customs examining warehouse.

The first floor contains customs collector's office, long room, store room, one office not allotted, public corridor, ladies' toilet and caretaker's quarters of four living rooms with bathroom.

The bell chamber and dial room of tower are carried well above the line of main roof, the interior is sheeted and provided with weight boxes ready for installation of bell and tower clock machinery.

Heating by a system of hot water, and lighting by electricity.

Plans and specifications prepared by this Department.

Clerk of works, W. E. Pollock.

Contractors, Nagle & Mills, Ingersoll, Ont.

## ORANGEVILLE.

### PUBLIC BUILDING.

Repairing outbuilding; supplying four Yale locks and padlock; executing plumbing and marble works; closing in pipes; raising handrail at main door; supplying tungsten lamps; painting work performed, and installing safe in custom house.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## ORILLIA.

### PUBLIC BUILDING—ALTERATIONS AND ADDITIONS.

The work of alterations and additions to building described in the report of 1914, is completed.

A contract was awarded November 11, 1914, for the supply and installation of interior post office fittings.

Post office boxes, drawers, and pigeon-holes supplied.

The bell and tower clock machinery with attachments were furnished from manufacturer.

Tungsten lamps were supplied.

### TEMPORARY PREMISES FOR CUSTOM-HOUSE.

The customs fittings and furniture, during alterations and additions to public building, were moved into this store building.

### TEMPORARY PREMISES FOR POST OFFICE.

A return light of glass in the store vestibule was cut short to accommodate brass postal receiver plate and a new plate glass was supplied and installed.

## OSHAWA.

### PUBLIC BUILDING—ADDITION.

The work of constructing an addition to this building described in the report of 1914, is completed.

Post office boxes and drawers were supplied.

A contract was awarded July 23, 1914, for the making, erecting and finishing of post office interior fittings.

Laying tile floors in post office; supplying two door checks and check oil; four pairs of doors; brass kick plate and iron thresholds for main entrance doors.

Carpenter work in connection with installation of tower clock; painting work to public building, and furnishing and laying cork carpet for offices and tungsten lamps.

## OTTAWA.

### AYLMER ANNEX BUILDING.

Repairs were made to electric bells, 2 desk telephones supplied, 1 2-light fixture, 1 2-light tungsten, 14 buttons, one push button, 1 3-point annunciator. Apartment 5 was renovated, one pane glass to storm window, one cane easy chair recaned, one pigeon-hole cupboard, one desk repaired, 3 keys supplied, 2 door springs, 2 chairs repaired and minor repairs effected.

Work supervised by John Shearer, Superintendent of Public Buildings.

### BLACKBURN BUILDING.

*Post Office Department.*—2 tables, 2 chairs, 1 sorting case, 4 electric light fixtures, 12 ventilators were supplied; 5 desks, 15 chairs repaired, 1 glass put in swinging

door and 1 plate glass put in window in money order branch; 3 Yale locks and keys were supplied and put on and minor repairs done to furniture and rooms, for Forestry and Irrigation Branches.

*Interior Department.*—3 special tables with plate glass tops, 2 chairs, 1 special cabinet, 29 window blinds, 2 office stools, 1 clock, 19 cushions, 6 pairs curtains, 5 brackets, 3 electric fans, 1 call bell, 14 shades and holders, 4 lamps, 2 step ladders, 1 rack, 1 mounting board, 1 frame for map rack, 1 set shelving, 13 feet cupboard, 2 door springs and stops, 7 yards green baize, 1 plate glass and green baize cover for table, 1 set wheels for ladder, 1 set chair castors, 1 card index, several lengths electric light cord were supplied for Railway Lands Branch; 1 desk phone was installed, lettering done on 12 doors, 23 yards linoleum and 21 yards brass binding were supplied and laid, 1,005 yards of floor were oiled, shelves erected in safe and in room No. 6, and several other minor repairs were done, also for Railway Lands Branch. One chair, 3 ventilators, 1 telephone stand, 2 small ladders, 2 door springs and foot stop and some electric light fixtures were supplied for B.C. Lands Branch; 8 rooms, lavatories and hall were renovated, also for the B. C. Lands Branch.

Work done by the Departmental staff.

Work supervised by John Shearer, Superintendent of Public Buildings.

BRYSON BUILDING.

*Department of the Interior.*—15 chairs, 9 desks, 2 filing cabinets, 1 hat tree, 1 hat rack, 1 swinging stand, 3 tables, 1 draughting table, 2 water coolers, 1 clock, 1 truck, 21 awnings, 28 blinds, 28 keys were supplied to the Dominion Parks Branch, some electrical apparatus was supplied and installed, windows frosted, a small opening closed with frame and door and several feet of shelving put up, also for the Dominion Parks Branch. Some office furniture was also supplied to the School Lands Branch.

*Department of Public Works.*—2 steel cabinets, 2 wooden stands, 2 dozen coat hooks were supplied, and 1 desk repaired and 24 feet shelving and 1 counter put up.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

BOOTH BUILDING.

*Department of Indian Affairs.*—During the year, the following repairs were made and goods supplied to the Department of Indian Affairs; 4 brass rods and curtains, 12 no-draught ventilators, one long plate glass ground edge, one padlock, 2 desk locks, some window glass, several minor repairs to book cases, chairs, clock, rug, etc.

Five anywhere lights, one 6-inch fan, 5 drop lights, 3 4-light tungstoliers, 2 3-light tungstoliers, sockets, plugs, cord, etc.

Three mirrors, 5 tables, 6 desks, 3 chairs, 2 8-day clocks, 6 XX Century water coolers, 16 rugs, 14 mats, 1 section, one base, one top, one pigeon-hole case, one cork carpet.

Twenty steel cabinets, several additions to steel filing cases, 250 guides, and 1 case for books.

Work supervised by John Shearer, Superintendent of Public Buildings.

CANADIAN BUILDING.

*Agricultural Department.*—4 desks, 1 desk rack, 4 chairs, 1 water cooler, 4 shade holders and shades, 5 lamps, 2 step ladders, 2 electric fans, 2 revolving bookcases, flush covers for desk, several bookcase sections, 11 newspaper files, 1 cupboard, 1 cushion, 5 cabinets complete, 1 card record desk, 10,000 cards, 2 correspondence units, 1 stationery stand were supplied; 1 radiator, 4 drop lights, 11 De Veau telephones, 8 keys, 24 boxes and a few other minor repairs were made, room No. 6 was renovated.

*Interior Department.*—41 chairs, 23 tables, 9 desks, 3 office stools, 26 cabinets, 2 cupboards, 2 map racks, 12 cushions, 1 safe, 1 mirror, 6 desk lamps, 1 card index, 3 bookcase sections, 1 8-point annunciator, 5 soap dispensers, 8 brass rods and curtains, 5 window shades, 2 window shields, 1 screen, 8 ladder trays, 1 sliding ladder, and 6 electric fans were supplied; 18 electric light fixtures, 4 desks, 1 wall and 1 extension telephone, 1 buzzer, 3 call bells, 2 Yale locks and 25 feet shelving were supplied and installed; 32 yards linoleum were laid, 111 yards of floor were oiled and 345 yards of wall tinted, doors were lettered, chairs, tables and other furniture repaired; 1 archway door and frame constructed; 1 sheet plate glass put in, smoke pipe was covered with asbestos, room No. 3 was renovated, glass put in, storm windows, 6 ventilators installed and sundry changes and alterations made.

The above were supplied to the Mining Lands, Immigration, Irrigation, Survey Records, Patent Writer's and Timber and Grazing Branches.

*Department of Trade and Commerce.*—2 desks, 3 chairs, 3 tables, 4 awnings, 8 blinds, 50 book supports and shelving for library, 2 ladders, 4 rods and curtains, 1 fan light were supplied; 1,530 yards washing and tinting two rooms, 4 lengths picture moulding, 24 wooden cases, electric lights, fixtures, etc., were supplied and installed, also a few other minor repairs were done.

*Militia and Defence.*—During the year, minor repairs were made. 28 panes glass put in, 10 door springs, about 100 coat and hat hooks put up; painting around elevator, 12 doors were lettered, one door handle, 3 brass rods and curtains supplied; 9 window deflectors were put up, 6 desk stools were repaired, one red cloth door made, 3 door stops, 55 new keys supplied, 6 skylights were covered with duck, one ice chest, 2 locks repaired, 5 new Yale locks and keys, one clock repaired. The following electric fixtures were put in during the year; 14 lamps, 9 electric fans, 59 drop lights, 22 call bells, 3 bell blocks, 5 De Veau telephones, 8 wall telephones, 3 desk telephones, 2 electropliers, 27 tungsten clusters, 6 batteries, 6 buzzers, 7 switches, 13 desk lamps, 4 telephone extension arms, 2 electric pads connected, 4 extension desk phones, 24 chandeliers, 6 2-light fixtures, electric lighting in Censor's Department. The following articles were furnished during the year to this department: 92 office and side chairs, 12 tables, 25 desks, 4 filing cabinets, 5 section bookcase, 15 bases, 5 tops, one rug, 1 4-drawer vertical file, one twentieth century water cooler, one rotary book case, 2 carpets, 5 mats, 50 yards brown cork linoleum, one coal scuttle, 12 window blinds, one Victor cabinet, 3 8-day clocks, 6 door keys, 14 section screens, one desk clock.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

EMMETT STREET BUILDING.

*Militia and Defence.*—One door lock put on, 3 doors lettered, one desk repaired, 15 window screens put up, one floor repaired, a speaking tube put in, cords put on 6 windows, 26 panes of glass put in, one office renovated, 32 feet partitioning and 20 feet shelving. Incubator connected to gas; 2 f.n.g. lamps supplied, minor changes to telephones, one telephone, 3 drop lights, 2 push buttons, one buzzer, 3 batteries, one closet seat and bowl; 1 steel filing cabinet was also supplied.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

G. T. RAILWAY CENTRAL STATION.

*Railway Commission.*—Minor repairs were made to assistant, secretary's office, engineer department, fire inspection, traffic department, chief engineer's office; renovating was done in several rooms, repairing was done on chairs, desks, tables; brass rod and curtains were supplied and placed; door stops and springs were put on; door lettered; floors oiled, stained and polished; bulletin board supplied.

Sockets and plugs supplied; telephones moved, etc., wiring done for phones and phone bells, repairs made to fans.

There were supplied during the year, 47 books sections, 11 tops, 17 bases, one desk, 19 chairs, 1table, one wardrobe, 3 mirrors, one lounge, one cabinet, 2 fire-place equipments, 2 card sections, 2 carpets, 5 mats, 2 pairs curtains, 6 window shades, 2 rugs; also 5 steel filing cases, 6 steel cabinets and supplies.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

JOURNAL BUILDING.

*Agricultural Department.*—1 water cooler, 10 yards carpet, 4 mats, 13 awnings, 2 drop lights, 1 door spring and stop were supplied, lettering was done on 1 door, one office was covered with linoleum and several other minor repairs made.

*Interior Department.*—3 desks, 3 chairs, 1 cupboard and map sections, 1 clock, 3 filing cabinets, 1 bookcase desk, 2 ladders, 2 cushions, 10 soap dispensers, 4 electric fans, 23 drop lights, 2 pulleys, 2 call bells, 20 feet electric light cord, 4 shades, 1 curtain, 32 label holders, 1 door check, 7 door stops, 1 door spring, 3 brass rods, 14 window poles, 1 curtain, shelving, filing sections, etc., were supplied for the Forestry and Irrigation Departments; 3 chairs and a few other repairs were made to office furniture, 12 panes of glass were supplied and put in, 5 windows were frosted, an addition made to a cupboard and number of doors were planed, electric lights in several rooms were re-arranged, and linoleum was supplied and laid in the photostat room.

*Public Works Department.*—1 screen in two parts, 1 fireproof safe, 1 electric fan, and 15 awnings were supplied and installed.

Work done by the departmental staff, and supervised by John Shearer, Superintendent of Public Buildings.

LANGEVIN BLOCK.

*Post Office Department.*—5 desks, 12 office stools, 15 foot stools, 41 chairs, 8 tables, 8 desk lamps, 4 section trays, 2 cupboard sections, 11 card sections with tops, bases, guides and cards, 9 correspondence tray stands, bookcase sections, 14 window shades, 5 window shields, 1 porcelain shade, 3 mirrors, 1 rug, 1 curtain, 1 hat tree, 1 grate, 1 leather cushion, 1 step ladder, 2 wash basins, 4 wooden tops for counters, 1 annunciator bell, 2 call bells, 9 electric light clusters, 6 3-light tungstoliers, 4 electric fans, 2 bracket lights, 10 drop lights, 200 feet telephone wire, 5 strands electric light cord, 12 feet chain, 1 campane fixture complete, 1 moonstone reflector, 6 feet ¾-inch water pipe, 6 panes plate glass, shelving, locks, etc., were supplied Postmaster General's room, Postal Note Division, Accountants' Branch and others.

Three rooms in Accountants' branch were renovated, repairs were made to 1 steel desk and cases, 2 office desks, 12 chairs, 5 office stools, 2 tables, 1 step ladder, 1 truck, bells, fans and a few other minor repairs; and an out porch was erected for Postal Note Division; 12 steel cabinets, filing sections, etc., were also supplied.

*Interior Department.*—The following were supplied the Minister's office: 2 electric fans, 3 annunciators, 2 wash basins, 1 cupboard, 1 mattress, 3 cushions, 7 awnings, 1 desk, 11 chairs and 3 rugs; electric light fixtures installed; 83 yards carpet and 62 yards cork linoleum supplied and laid; lettering done on door, and 1 sofa repaired. 15 steel filing cabinets, 1 steel filing case and 1 shelf bookcase were also supplied.

*Private Secretary's room.*—Rods, curtains, wind shields, coat hooks, and 1 plate glass.

*Correspondence Room.*—3 electric fans, 7 desk lamps, 2 window shades supplied and 1 coil repaired.

*Deputy Minister's Room.*—2 desk lamps, 3 electric fans, 1 call bell, 1 door spring, 1 rug, curtains, etc., were supplied, and 1 chair repaired.

*Assistant Deputy Ministers' Room.*—1 twentieth century cooler, lock, plate, etc., on door.

*Registration Branch.*—2 desks, 1 desk lamp, 1 desk phone, 1 chair, 1 call bell, 1 push button were supplied and minor repairs to furniture, etc.

*Lands Patent Branch.*—5 bookcase sections and top, filing sections, 1 cupboard, 40 stop catches, 1 cushion, 3 cushioned chair backs, 2 chairs, 1 window screen, 120 feet cord, shades, etc., 1 door spring supplied; 32 yards linoleum supplied and laid; and minor repairs to furniture.

*Dominion Lands Branch.*—1 desk, 2 chairs, 1 electric fan, 5 cushions, 3 lights of plate glass, 1 storage section, 1 wash basin, 1 cock, 1 shade, 1 door check, 2 door springs, and sundry electric fixtures were supplied; 1 chair and filing cabinet were repaired.

*Messenger's Room.*—1 wall phone and 1 strip linoleum were supplied and installed.

*Timber and Grazing Branch.*—The electric lights were rearranged.

*Agricultural Department.*—6 desks, 10 chairs, 2 T. W. stands, 1 carpet, 25 soap dispensers, 6 evaporators to water coils, 1 wash basin, 1 3-light tungstolier, 6 desk lamps, 1 drop light, 1 electric clock, 3 call bells, 1 12-inch fan, 2 card cabinets, 4 trays, 2 pairs book supports, 2 cushions, rod and curtains were supplied; 61 yards linoleum supplied and laid; 1 telephone, 1 radiator, 1 radiator unit installed; repairs were made to 12 chairs, 3 desks, 2 door springs and foot stops; also a few other minor repairs; 1 carpet was supplied and 1 cleaned and remade and Minister's and private secretary's rooms renovated, 1 large screen was recovered in room No. 62, and electric lights were rearranged in room No. 11. 5 special steel cabinets, 2 card cabinets, and 8 4-drawer steel cabinets were also supplied.

*General.*—Alterations were made to heating mains to improve the flow to the lower floors.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

PARLIAMENT BUILDINGS.

*House of Commons.*—Seventeen rooms and the entire restaurant were cleaned, tinted and painted; 7 new windows were supplied, 6 hot water radiators, two lavatory basins and 2 chimney tops were supplied. Hot and cold water services were taken to 3 basins; room 34 was divided with a terra cotta partition; one hardwood floor was laid and 2 sets of grate bars supplied to boilers. There were also supplied and installed one copper range boiler for restaurant, one telephone, 3 desk lamps, one large copper float for tank, two 2-light, two 3-light, one 5-light and one 6-light tungstoliers, one telephone, one electric heater, 104 electric lamps, 258 sockets, 252 shades, 50 zines, 18 sockets, one annunciator, one telephone arm, 5 bell ringing transformers, one brass rod and curtain, 8 name plates, one rotary ventilator, one cupboard and 1,000 feet lumber. Some furniture, glazing, etc., were repaired, pigeon-holes and doors were lettered and numbered and various minor repairs executed.

*Library.*—Four rooms in caretaker's apartments were cleaned, tinted and painted; 2,000 40-watt frosted lamps were supplied; double action hinges were supplied on door leading to House; 11 brass inkstands were repaired and minor general repairs were effected.

*Senate.*—The skylight over Speaker's stairs was repaired; the steward's apartments were repapered; the Speaker's apartments were renovated; the heating pipes in basement were renewed; the drain and cesspool of the blue-book room was renewed and a new w.c. supplied.

Work done by departmental staff.

John Shearer, Superintendent Public Buildings, Ottawa.

PARLIAMENT GROUNDS.

The retaining wall and iron fence along the top of escarpment were extended from a point near the north corner of the Eastern block to the entrance of the grounds at Connaught place. The remainder of the duets were cleaned and bricked up at their termination on the Lovers' walk. A number of the trees had repairs made by a tree surgery company. Statues of Hon. George Brown and Baldwin and Lafontaine, the last named forming one group, were erected in the grounds, as also the pedestal of a statute of Hon. T. D'Arcy McGee.

Work done by departmental staff.

John Shearer, Superintendent of Public Works, Ottawa.

Thomas Davis, gardener.

EAST BLOCK.

*Finance Department.*—In the minister's office, 3 window frames were repaired and renovated; in the Currency Branch, 16 pieces plate glass, 33 feet oak railing, 7 feet V-joint partition and one curtain, concrete floors, 190 yards painting to walls and woodwork; in room 38, door springs and stop; rooms 40 and 46, door spring and stop; minor repairs to 2 chairs; the comptroller of currency rooms were renovated; 20 feet of plank gangway; rooms 40 and 42, 2 cloth doors, 2 brass rods and curtains, 4 window frames, washing and tinting, etc., 2 3-door cupboards.

*Minister's room.*—Repairing 4 chairs, Yale lock, door spring and stop; room 59, 2 shelves supplied. Basement, 5 rooms were tinted, 130 feet shelvings, 36 feet cupboards, brass rod and curtain; in the office of the Accountant of Contingencies, hardwood floors were laid in 4 rooms, and frame door complete; partition, brass rod and curtain, one large cupboards for charwomen, Yale locks, tin sign and door spring; walnut cabinet repaired office of accountant of contingencies.

Eight sets ventilators, 4 frames for same; room 41, 2 deflectors, brass rod and curtain, 6 hat and coat hooks, minor repairs.

There were furnished to the currency branch, one oak table as per plan and one stand for book, 44 yards of cork and one rug, 2 mirrors, 3 tables with glass partitions, 12 bent wood chairs, sections, base and top, one 4-drawer steel filing cabinet; to the tariff branch, 6 gothic awnings and one special truck. In other rooms of this building the following furniture: 5 desks, one glass top for desk, 19 chairs, one bookcase, two sections bookcases, 3 cupboards, 6 tables, 3 rugs, 2 fenders, scuttles and sets fire irons, 166 yards brown cork linoleum, 4 window shades, 3 pairs curtains, one sheep skin mat.

Two new cast-iron wash basins were installed, 2 new slop sinks, also sundry small plumbing work done, one asbestos curtain for incinerator room.

A number of drop lights were installed and two 5-light tungstoliers and repairs made to wiring; switches were put in, etc. Two desk telephones were installed, and one wall telephone, as well as several alterations to other phones, 85 feet of 1-inch rope supplied for charmen to hoist coal.

*Department of Justice.*—Twenty keys were supplied for police, also several locks and hand-cuff keys; repairs made to clocks, desks, chairs, tables, etc. Door springs put on, curtains for toilet rooms, coat and hat hooks put up, repairs made to easy chair, brass rod and curtain; washing and tinting several rooms and some hardwood floors laid; several other rooms renovated and some general repairs to woodwork, fanlights, etc. Thirty-six brass tags supplied and 10 keys and door spring.

Tables, chairs, bookcases, davenport, clock case, carpet rug, window shade, etc., were supplied to the office of the Minister's private secretary; other rooms were supplied with the following: 3 desks, one table, 12 chairs, 4 rugs, 2 twentieth century water

coolers, 3 cupboards, 4 mirrors, one carpet, 4 4-drawer cabinets, 5 cuspidors, 5 window shades, 2 fireplace equipments, one room with brown cork linoleum, one 8-day clock, one lounge.

Repairs were made to electric lights, new bells, several drop lights and tungstoliers furnished, 4 electric clocks, several desk lamps, 3 desk telephones installed; packing for pumps, 30 May-Oatway fire extinguishers, 4 waste paper cans for public buildings, Ottawa. One branch tap for washing automobile; 36 pint tins metal polish, and cord, plugs and sockets and switches, etc., etc.

*Auditor General Department.*—Steel cabinets were removed and altered, locks repaired, new keys supplied, shelving altered and added to, step ladders made, 6 rooms renovated; window shades put up, cupboards supplied and hardwood floors laid, partitions put up, oil cloth laid, floors planed and polished, blinds repaired, brass rods and curtains supplied; 6 new wash basins erected complete; 3 dry batteries, 24 electric fixtures and drop lights installed, bell connections made, one electric heater and kettle, 2 telephones installed. Carpets cleaned and relaid, 60 yards linoleum, 75 feet brass moulding, one small table, one 4-wheel truck, one corner cupboard and mirror, one large mirror, 8 desks, 3 chairs, 34 section cabinets, one cheque file, one steel platform truck were supplied.

*Governor General's office.*—There were 3 chairs supplied, 2 desks, 2 mirrors, one clothes hook, 20 newspaper files, 2 cast iron wash basins complete, one wash bowl, one plug, one desk phone supplied, sundry phones changed, 4 F. G. lamps, 2 drop lights. Brass rods and curtains supplied to several rooms, doors covered with green cloth, minor repairs to desk shelves, cupboards removed and replaced, steel filing case removed, locks, keys, etc., supplied.

*Privy Council.*—There were 2 lounges and 7 chairs repaired and recovered, one large red curtain and pole put up, one brass rod and curtain, one roll top desk and chair polished, door spring and locks repaired, 2 doors covered in red baize. One rug for feet, 25 yards carpet, 65 yards felt and carpet cleaned and relaid; one plate glass top for desk, 4 chairs, 8 bookcase sections, 2 cupboards, one twentieth century water cooler; one call bell installed, one chandelier, one electric radiator, one F. G. lamp, 4 12-inch electric fans, one cast-iron enamel basin installed.

*Privy Council.*—Two steel filing cabinets were supplied.

*Secretary of State Department.*—There were supplied 5 5-light tungstoliers, one 4-light and three 3-light tungstoliers. Electric bells had positions changed, telephones removed and desk phones installed; various rooms had 23 soap dispensers put, 3 electric clocks have been installed, 3 desk lamps for stenographers supplied; shades, cord and knobs supplied to archives, one hot water kettle, one sink and basin for messenger's room; 11 rooms were thoroughly renovated, 12 squares hardwood floor were laid, 1,730 square feet of flooring were planed, various rooms had panels painted; there were repairs to windows and doors and Yale locks, 8 door springs and keys furnished, cupboards taken down and replaced; ladies' and gents' lavatories were put in good order. Doors were covered with baize, and one new window put in. The following was supplied: 6 tables, 4 bookcases, 10 sections, 9 bases, 12 tops, 9 chairs 5 desks, 6 brussels carpets, 2 pairs curtains, 48 yards cork linoleum, 2 flags, 4 awnings, 2 stationery cabinets, 10 mats, 14 rugs of various sizes, one set fireplace equipment, one card case, 125,000 cards 3 x 5; one safe, 2 window shades, 2 ladders for filing cases.

*Supreme-Exchequer Court.*—Renovating and burlapping 2 rooms, 2 signs for Judges' rooms, 2 Yale locks, 18 keys, several door stops were supplied and some minor repairs to painting done; 6 judges' chairs re-upholstered, one cupboard made to plan; new plaster ceiling to Supreme Court. 40 yards linoleum were supplied, also clean-

ing and relaying one carpet, one carpet re-made, one wardrobe cupboard, extension to bookcase supplied; 12 yards Brussels carpet made and laid, 7 chairs, one 8-day clock, one settee; sections, base and top. Electric bells were repaired, telephone installed, 2 2-light tungstoliers, sundry lamps, cord, plugs, switches, etc., 67 holophane shades and a pair handy phones with call bells; one wash bowl; one cast iron wash basin.

*Public Works Department.*—15 rooms completely renovated, new windows put in and equipped with new patent pulleys and eight of the rooms had new hardwood floors laid; 4 glass lights, one door spring, one new vestibule screen at centre entrance, one bull's eye window constructed in tower, trap door placed and Yale lock and key; 400 feet birch, 4 counter bases, 4 hand holes were supplied.

The following steel cabinets were also supplied:—

*Auditor General's Department.*—6 4-drawer cabinets.
*Department of External Affairs.*—6 4-drawer cabinets.
*Department of Finance.*—1 special steel cabinet, 2 4-drawer cabinets.
*Governor-General's Secretary's office.*—Alterations and additions to cases.
*Department of Justice.*—1 special cabinet, 4 4-drawer cabinets, 6 lockers.
*Department of Secretary of State.*—23 4-drawer cabinets, 2 special cabinets.
Work supervised by John Shearer, Superintendent of Public Buildings, Ottawa.

WEST BLOCK DEPARTMENTAL BUILDING.

A vault door was provided and built in and a doorway was bricked up for the Customs Department.

The Department of Marine and Fisheries was removed to the Rea building, Sussex street, and the vacated quarters were cleaned, tinted, painted and occupied by the Customs Department and the Department of Trade and Commerce. In addition to the foregoing, there were 25 rooms cleaned, tinted and painted, 4 for the Trade and Commerce Department, 8 for the Inland Revenue Department, 6 for the Customs Department, 5 for the Public Works Department and 2 for the Department of Railways and Canals. Of furniture, there were supplied 55 desks, 4 for the Inland Revenue Department, 17 for the Department of Trade and Commerce, 4 for the Department of Railways and Canals, 10 for the Department of Public Works and 20 for the Department of Customs; of blinds there were furnished 119, of which 3 were for the Department of Inland Revenue, 14 for the Department of Trade and Commerce, 9 for the Department of Railways and Canals, 82 for the Department of Public Works (including those in outside buildings), 2 in the Department of Customs, and 9 for the Department of Marine and Fisheries; of chairs there were 83, of which 4 were for the Inland Revenue Department, 18 for the Department of Trade and Commerce, 4 for the Department of Railways and Canals, 10 for the Department of Public Works and 47 for the Department of Customs; of tables there were 38, of which 4 were for the Department of Trade and Commerce, 2 for the Department of Railways and Canals, 20 for the Department of Public Works and 12 for the Department of Customs; 17 rods and curtains were supplied, of which 3 were to the Department of Inland Revenue, 6 to the Department of Trade and Commerce and 8 to the Department of Public Works; 32 cupboards were supplied, of which 20 were to the Department of Railways and Canals, 11 to the Department of Trade and Commerce and one to the Department of Inland Revenue; 10 lavatory basins were fitted up, 4 of which were for the Department of Inland Revenue, one each for the Department of Marine and Fisheries and the Department of Railways and Canals, and 4 for the Department of Public Works; of shelving 214 feet lineal and 2 sets were furnished to the Department of Marine and Fisheries, 160 feet lineal and 4 sets to the Department of Railways and Canals, and 76 feet lineal and one set to the Department of Public Works; 10 step ladders were furnished, one to the Department of Inland

Revenue, 6 to the Department of Railways and Canals and 3 to the Department of Public Works; 14 ventilators were furnished, one to the Department of Inland Revenue, one to the Department of Railways and Canals, 6 each to the Department of Public Works and the Department of Customs; 22 cabinets were supplied, 5 to the Department of Trade and Commerce, 11 to the Department of Railways and Canals, and 6 to the Department of Public Works; 13 mirrors were supplied, 7 to the Department of Trade and Commerce, 5 to the Department of Public Works and one to the Department of Railways and Canals; a fanlight was supplied each to the Departments of Marine, Trade and Commerce and Public Works; 197 boxes were supplied to the Department of Public Works, 6 to the Department of Customs and 18 to the Department of Trade and Commerce; 10 rugs were supplied to the Department of Public Works, 2 to the Department of Railways and Canals, one to the Department of Trade and Commerce and 4 to the Department of Inland Revenue; one desk lamp was supplied to the Department of Public Works, 5 to the Department of Railways and Canals, 2 to the Department of Inland Revenue; 3 telephones were installed for the Department of Trade and Commerce, one each for the Department of Inland Revenue and Department of Customs and 2 for the Department of Railways and Canals; 7 awnings were supplied the Department of Railways and Canals, 20 to the Department of Public Works and one to the Department of Customs; 133 yards of linoleum were supplied to the Department of Railways and Canals, 49 yards to the Department of Public Works and 56 yards to the Department of Customs; 10 fans were supplied to the Department of Public Works and one to the Inland Revenue; 2 water coolers were supplied for the Department of Railways and Canals and 6 for the Department of Public Works. The Department of Inland Revenue had supplied 22 feet lineal of partition, 2 door springs, one blower for grate, one range boiler, 3 hot water radiators, 1 6-, 1 5- and 1 4-light tungstoliers, 9 shades, one map rack, 5 wardrobe ends, 14 library sections, 5 boards with coat hooks, one scale and one cooler stand. The Department of Trade and Commerce had supplied 14 sets fire irons, one mat, one file cabinet, 28 doors lettered, one hardwood floor, 1,500 yards washing and tinting, 11 locks and keys and 4 3-light tungstoliers. The Department of Marine and Fisheries had 2 3-light tungstoliers, one door spring and 2 chairs. The Department of Public Works had supplied one counter, 49 keys, 3 tin signs, 5 locks, 7 door springs, 3 chair cushions, 5 door checks, one green baize door, 2 book cases, 2 clocks, one screen, one picture frame and 2 drawing boards, etc. The Department of Customs had supplied one blower, 300 lettered signs and 35 safety stair treads, 716 square yards of floor in Department of Public Works were oiled, 15 stools were supplied to the Department of Public Works and 3 to the Department of Railways and Canals.

Work done by departmental staff under the supervision of John Shearer, Superintendent Ottawa Public Buildings.

PRINTING BUREAU.

Furniture, furnishings, etc., etc. There was supplied to this building, the following furniture: 14 desks, 40 chairs, 6 tables, 470 yards cork linoleum, 275 yards brass binder, 3 settees, 2 bookcases, 5 8-day clocks, 9 awnings, 16 book sections, 4 tops, 4 bases, one davenport, 23 window shades, 14 rugs, 2 plate glass tops for desks, 28 yards green rep for curtains, 26 yards carpet.

Considerable repairing was done during the year, requiring the supplying of lumber, flooring, nails, screws, hinges, renovating, etc., new windows, partitions, cleaning and painting, repairing concrete floors, locks, door springs, window glazing, step ladders were furnished, brass rods and curtains; ventilating pipes repaired, repairs to roof and holes in floors.

Steel cable for elevators supplied and put in place; vents, radiators for ventilation system installed; supplies of fittings, nipples, tees, elbows and pipe, plumbing fixtures, fittings, etc.

Wall telephones installed in several rooms; 4 boilers were relined; a large quantity of electrical material was supplied and 31 drop lights, switches, clusters, etc., were installed.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

ROBINSON BUILDING.

*Post Office Department.*—Six ladders and 1 rough table were made and supplied, 5 chairs, 9 pairs curtains, 14 drop lights and other electrical apparatus were supplied; repairs were made to 9 chairs, 2 cabinets, platform, electric bell connections, etc., 1 partition and 1 platform were erected, besides several other minor repairs.

*Public Works Department.*—Thirteen steel cabinets and supplies, 8 draughting table covers, 1 cabinet and set guides, 1 set scales, 3 water coolers, 1 rod and curtain, 1 chair, 1 revolving stool, 1 table, 2 clocks, 5 desks, 1 letter press table, 8 cuspidors, 1 mirror, 1 electric fan, 4 desk lamps, 2 tungstoliers were supplied, and some heating pipes were covered with air cells.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

ROYAL MINT.

At the refinery, two small platforms for tanks were built; the flues of 6 gold cells were altered; the base of washing tower and pipes were sheeted; three wooden tanks, a brick cupboard, a wooden bin, a crate for double windows, a closet bowl, trays, a tank, a pine cupboard, a clothes locker, 150 feet shelving, one iron truck, one cast iron bell trap cesspool, some 15-inch tile pipe, shovels and tools, one table, 2 chairs, 24 basket pans, bowls, etc., were supplied; 10 sections of wall radiators were installed; the plumbing work was altered and the oak panels in door were removed and replaced with glass. At the assay office the position of 4 sinks was changed and a copper boiler with coil installed and the drain was repaired. The generator room was ventilated. At the police lodge, two door springs and a door stop were supplied.

Work done by the Departmental staff under the supervision of J. Shearer, Superintendent of Ottawa Public Buildings.

GOVERNMENT HOUSE.

(Rideau Hall.)

A contract was entered into on August 13, 1914, with Messrs. P. Lyall & Sons Construction Co., Limited, of Montreal, for an addition to the heating and for a ventilating system for the main reception hall.

A concrete sidewalk was laid from dairy to back entrance gate (275 lineal feet by 4 feet wide) and repairs made to all plank walks throughout the grounds.

Three new gates and concrete gate posts were built at the back entrance, and on top of these were fitted lamp posts.

650 yards of wall in the cloak room was plastered with two coats cement to match the Minto wing.

400 yards of front wall and two gables of stables building were prepared and lathed with expanded metal lathing and plastered with two coats cement.

Two large chimneys of the greenhouse and five chimneys of the stables were plastered with cement to harmonize with the other work.

The old wooden wall of the manure pit at the stables was demolished and replaced by a concrete wall 40 feet by 6 feet by 8 inches thick.

A large double window with sliding pane was made for staircase window, and three large double windows were made for the office.

A shooting gallery for use of the Rideau Hall Rifle Club was fitted up in the curling rink, and a steel target butt, 15 by 8 by ¾-inch was set up across the end of the rink and faced with 2-inch plank to prevent lead from flying.

A cupboard, 6 feet 3 inches by 3 feet 2 inches deep was made to hold the ammunition, rifles, etc.

A locker cupboard was made for the police guard room, also a pigeon-hole case.

A set of shelves to hold bric-a-brac was made and fitted up in the billiard room.

Four moulded shelves were made and placed over the radiators in the dining room.

A room in the attic was fitted up for storage.

Two store rooms over the shop were altered, and a rack was fitted in the attic for lumber.

The basement under the ball room was cleared and used for a store room and plumber's shop.

The large stone pediment over the new front was covered with copper to prevent leaks through the stonework into the new rooms on the second floor.

The main avenue from the lodge gate to the front of the house was widened in its entire length from one to thirteen feet, which entailed a large amount of filling (about 500 cubic yards).

The portion widened was graded with rough stone, over which 2 inches of crushed stone was laid and rolled; this was then covered with ⅜-inch crushed stone and blinded with stone dust, then rolled to a smooth surface.

The old avenue from Mackay street, and the road to the back entrance gate from Louise avenue were also treated in the same manner as the main avenue.

In all, 227½ tons of crushed stone and 30¾ tons stone dust were used on the avenues and roadway, and 5,178 superficial yards of sodding were laid about the grounds where the grading had been done.

A number of tree guards were made and placed to protect the young trees planted on each side of the roadway to the rear entrance.

A great number of trees marked by His Royal Highness, the Duke of Connaught, were cut down and removed, and 600 trees, maple, elm, oak, ash and spruce, were planted under his direction.

A small piece of ground was prepared for a nursery in which several hundred young trees of different kinds were planted for future renewals. These had to be regularly watered during the summer months; to accomplish this, about 900 feet 1-inch B. iron pipe was laid on the surface of the ground from connections made with the water main; on this pipe, hose pipe was placed at convenient distances. When this means could not be had, a horse and cart were used to carry the water.

A swampy field on the south-east corner of the grounds below the kitchen garden had to be drained, which was accomplished by laying 950 lineal feet agricultural tile drain, and 33 lineal feet Scotch tile was also used to connect to the city sewer.

A large number of stumps and roots of trees formerly cut down were grubbed out and removed; also a great many boulders on the surface of the ground in the woods on either side of the avenues were removed and the holes entailed thereby filled and seeded with grass seed.

All green blinds for gate lodge repaired and painted. Alterations were made to shelving in glass room.

The vault door in the basement passage had to be forced open as the key was lost, the door taken off, repaired, lock altered and a key made for same.

All heating coils in the rose and carnation sections of the greenhouse were taken down to permit wooden cleats holding same being removed. The coils in the greenhouse were cleaned and painted.

A large number of pieces of furniture were repaired.

Three hundred and fifteen yards carpet were lifted, cleaned and re-laid.

One hundred and eight yards carpet were cleaned, dyed and laid.

A large quantity of painting, distempering, etc., was done about the buildings, fences, slide, etc., etc.

The fences and outbuildings, formerly of a red colour, were repainted a green and gray colour respectively, of which the following is a summary:—

| | | |
|---|---|---|
| 18,200 | superficial yards | painting. |
| 1,237 | " " | cleaning and tinting. |
| 352 | " " | cleaning and papering. |
| 314 | " " | staining and shellacking. |
| 1,908 | " " | cement wash walls and chimneys. |
| 125 | " " | enamelling tables, chairs, etc. |
| 350 | " " | frosting glass in conservatory. |
| 575 | " " | waxing and polishing floors. |
| 160 | " " | bronzing radiators, chairs, etc. |
| 839 | " feet | repairing glass in greenhouses, etc. |
| 65 | days' labour | painting slide. |
| 102 | " " | on sundries. |

The log cabin walls were raised where sunken through rot, and underpinned with new pine logs. The doors and windows of the cabin were also repaired and painted.

In the secretary's cottage, the large storage cupboard in the basement was repaired and altered, and twelve old doors removed. A new front with three pairs panel doors was made and fitted up. A new cornice put on same and sundry other repairs done.

The snow scraper for sidewalks was rebuilt.

A table 4 by 2 feet was made for wash room at the rink.

Twenty trays for holding glassware made for Governor General's quarters at the citadel, Quebec.

575 bulb and seed boxes 20 by 16 by 2 to 4 inches deep, were made.

60 shade screens covered with cotton made for propagating beds.

30 supports for the screens were also made.

16 hot bed frames 10 by 5 feet by 16 inches deep were made.

225 cedar stakes from 5 to 7 inches long were made.

One wheelbarrow of special size was also made for the greenhouses.

One water tank 4½ feet by 3 inches deep was built for hot bed grounds.

One plough complete with gauge wheel was supplied for the gardens.

Two sets ten-pins were provided for the bowling alley.

The following is a list of furniture, furnishings, linens, china and glassware, utensils, etc., supplied during the year:—

30 Holland blinds.
8 pieces Holland.
3 electric irons.
2 Morris chairs.
1 sofa.
1 couch restuffed and covered.
1 mirror.

24 pairs lace curtains.
4 muslin curtains and brass rods for same.
67½ yards damask, shot silk, shot velvet for table covers, etc.
73 yards cretonne for covering sofas, chairs, etc.
38 flags for decorations.
3 pairs blankets, 2 feather bolsters.
2 electric fans.
1 knife cleaning machine.
8 large galvanized iron cans.
16 large galvanized iron coal scuttles.
2 puree sieves, 2 sets weights for scales.
1 potato masher, 3 ice picks.
1 agate pail.
1 heavy roasting pan.
2 6-lb. smoothing irons.

*Linen.*—

42 dozen cloths for glass, china, etc.
28 yards sheeting.
24 dozen stable and kitchen rubbers.
12 dozen dusters.
6 dozen roller towels.

*Glassware.*—

42 decanters.
1,288 champagne, claret, sherry, port and liqueur glasses.
72 water bottles and glasses.
220 tumblers.
205 finger bowls.
48 butter pats.
12 mustards.
18 round complete dishes.

*China.*—

12 side dishes, assorted sizes.
236½ dozen plates, dinner, soup, etc.
98 cups and saucers.
34 egg cups.
129 jugs, assorted sizes.
4 soup tureens.
7 salad and slop bowls.
9 covered muffins.
11 oval and square comports.
6 toilet sets, with slop jar.

*Stoneware.*—

6 kitchen pans.
10 soup tureens.
5 side dishes.
20 milk jugs.
12 toilet sets.
18 mixing bowls.
48 oval bakers.
12½ dozen plates.
18 3-quart tankard jugs.

*Sundry Articles.*—

1 coal stove for men's cottage.

1 coal stove for rink room.

The conservatories were kept in order, the lawns, drives, etc., rolled and otherwise tended. The roofs, paths, slides, etc., were cleared of snow by the departmental staff, by whom the grounds, lawns, gardens and plant houses were maintained. The usual periodic cleaning, packing and unpacking done; arrangements for and attendance on entertainments were furnished, and rinks, slides, etc., kept in order.

Work done under the supervision of Wm. Hutchison, Superintendent.

REGAL BUILDING.

*Labour Department.*—The entrance hall and stairway were cleaned, tinted and painted; the hall laid with linoleum and the stairs with new brass-bound treads; a ladies' lavatory was installed and 96 feet of hardwood railing were erected. Six leather cushions, 2 cabinets, 6 desks, 16 chairs, 2 fans, 2 blinds, 7 tables and one truck were supplied.

Work done by departmental staff.

John Shearer, Superintendent of Public Buildings, Ottawa.

22 VITTORIA STREET.

*Department of Public Works.*—One draughting board and a pair trestles; 6 pieces pine plank; painting and papering done. One desk telephone supplied.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

WOODS BUILDING.

*Customs Department.*—1 desk, 1 steel mat, 4 ventilators and 1 De Veau telephone, were supplied; 6 high desks were made and supplied; 1 radiator installed and 14 chairs and 1 window repaired.

*Interior Department.*—3 electric light shades, 1 lock and 24 keys were supplied; 2 rugs were cleaned, chains were put on windows, and a few other minor repairs were made.

*Trade and Commerce Department.*—1 mirror was supplied, 1 door was lettered and several minor repairs were made.

*Militia nad Defence Department.*—2 safe cabinets, 3 card cabinets, 2 special distributing cases with 2 ladders, several filing sections, etc., were supplied, and several repairs were made to office furniture.

Work was done by the departmental staff, and supervised by J. Shearer, Superintendent of Public Buildings.

EXPERIMENTAL FARM.

*Dominion Observatory.*—A monolithic building was built for a transformer hut, and connected by drain to main farm sewer.

A copper covered revolvable roof was placed on the stellar camera hut.

A contract was entered into August 8, 1914, for the supply and installation of a revolving roof.

*Director's Residence.*—A system of plumbing pipes and fixtures, electric light wiring in conduit, fixtures and hot water heating radiators and piping was installed in the sun room.

*Chief Astronomer's Residence.*—A new sun room of frame and glass with shingle roof on the present verandah was erected on the southern side of this building.

Electric light was extended to the sun room and fixtures provided.

*Chief Dominion Chemist's Residence.*—Electric wiring and hot water heating was installed in the new sun room of this building.

*Carpenter Foreman's Residence.*—Bath, basin, w.c. and kitchen sink with range boiler and the necessary hot and cold water pipes, waste and vent piping were placed in this building.

*Main Office Building.*—The old plumbing pipes were removed and new piping substituted. The existing plumbing fixtures were installed with new connections and three new basins were supplied.

*Horticulturist's Residence.*—An entirely new system of plumbing pipes and fixtures, electric light wiring in conduit and fixtures and hot water heating apparatus was installed in this building.

*Husbandman's Residence.*—A new hot water furnace was installed in the basement.

*Main Cow Barn.*—Water pipes to cattle stalls and stanchions to sinks were laid in the main cow barn.

*Biological Building.*—Electric wiring was executed to the poultry sheds in connection with this building.

*Green House Buildings.*—A new office building and a range of green house were constructed. Brick office building on concrete foundation 28 feet by 36 feet, two stories.

A monolithic root house vault built outside and connected with the boiler house, at the greenhouses.

Drains were laid in the several passages of greenhouse and connected with the main sewer of farm.

Concrete centre and wall plant beds and shelves with concrete walks between were built, and 3-inch water troughs erected to remove roof water from greenhouses.

*Grounds.*—The grounds around the new geodetic building were graded. The main sewer of farm was connected with the city sewer at Hickey avenue, a distance of 500 feet from the north end of farm limits.

Drains were laid to the husbandman's residence (300 feet), barn (200 feet), biological laboratory (200 feet), seismograph vaults (600 feet), and each connected into the main farm sewer.

A gas main was extended from Carling avenue to the chemical laboratory building, office and other buildings.

A system of fire alarm wires, telephone wires and electric light wires were each laid in separate conduit piping throughout the observatory grounds, and connections made with the several buildings.

One corporation hydrant was put in near the centre of the observatory grounds for fire protection.

An overland water pipe, inch diameter, was laid from the biological laboratory to the poultry sheds.

Twelve hundred feet of two-inch water pipe was laid in rock below frost from the city main on Preston street, to the duck pond, St. Louis dam.

Work supervised by John Sharp, clerk of works, Ottawa.

SEISMOGRAPH VAULTS.

Two subterranean vaults, one 12 feet wide by 20 feet long by 8 feet high, the other 8 feet wide by 20 feet long by 7 feet high, with passageways connecting with the observatory building, were constructed.

The walls and reinforced roof are built of monolithic concrete. The floor is of reinforced concrete with steps in passageways as required to connect to the different floor levels.

In the passageways and to each of the vaults are intercepting copper covered doors and frames.

The reinforced concrete slab of roofs is carried on steel beams.

Pedestals or bases of concrete are formed in each vault on which to mount instruments.

A 9-inch drain connects with the main sewer of farm.

### NEW GEODETIC SURVEY BUILDING.

A contract was entered into December 27, 1913, for the construction of this building on a site near the northern gate of experimental farm on Carling avenue, in rear of the Royal Observatory building. December 3, 1913, an accepted offer was authorized for an addition to above contract on amended plan.

The building measures 71 feet front by 45 feet deep, three stories in height and 21 feet additional frontage by the same width, two stories high, with a one-story extension for the rear stairs.

The footings under the basement, foundation walls, and cross walls are of concrete. The footings to steel columns double reinforced concrete.

The basement partitions and encasing of columns concrete.

The foundation walls are of local limestone facing from finished ground line to top of basement plinth and external steps and landings of selected limestone; cut and dressed stone above plinth course; sill heads and trimmings to entrance doors of Sackville, N.B., sandstone to match the stone in corresponding work in the Royal Observatory building.

The basement walls are waterproofed with a coating of hot asphalt. From plinth to top of building, the walls are of red pressed brick bedded in red mortar. The quoins or corners of the building are rusticated.

The cornice of copper moulded with modillions, copings and flashings of copper.

The interior of the building is carried on a framework of steel, the several floors and roof being of reinforced cinder concrete slabs. The steel columns and beams are enveloped in a covering of reinforced concrete.

The dividing partitions are of porous terra cotta and wall furring of fireproof terra cotta.

The basement floors and duct for heating pipes are waterproofed by a coating of hot asphalt.

All roofs are of felt, tar and gravel with internal down pipes.

The stairs to rear entrance and in furnace room are of iron. The main stairs from basement to second floor of iron with marble treads, iron balustrate and hardwood handrailing.

The vestibules on ground floor and all toilet rooms above basement of marble terrazzo. Toilet room walls lined with glazed tiles on marble bases; toilet under rear stairway, cement floor; walls and ceilings, plastered; floors throughout of birch on sleepers.

The basement is divided into lecture hall, office, standards room, chronograph room with ice storage adjoining, kitchen, furnace and fuel rooms, rear entrance and toilet room off the rear stair.

The ground floor is assigned to eleven offices, front and rear entrances, vestibules and wide corridors, main stairs to upper floors and to basement, rear entrance stairs with grade entrance to basement in a separate enclosure and a toilet room.

The first floor contains eight offices, corridor, large draughting room on eastern end and toilet room.

On the second floor are three offices, two draughting rooms, corridor, toilet room and access from corridor to roof of wing.

Heating is by hot water from twin connected furnaces, and lighting by electricity, wiring in conduit and includes electric fixtures.

Plans prepared by this Department.

Clerk of works, John Sharpe, of this branch.

Contractor, W. H. McGillivray, Ottawa.

The construction was completed during the fiscal year.

BIRKS BUILDING.

*Department of Agriculture.*—Partitions and shelving were put up and a dark room constructed, and several pieces of office furniture supplied.

*Department of the Interior.*—Two cabinets, 1 desk telephone and a few minor articles were supplied.

*Department of Militia and Defence.*—One steel cabinet was supplied.

*Department of Public Works.*—Five steel cabinets were supplied. Two boxes lined with zinc, 2 chairs, 1 table, 1 rug, 26 blinds and 1 special bookcase were also supplied; repairs were made to office furniture.

Work done by the departmental staff and supervised by John Shearer, Superintendent Public Buildings.

CARLING BUILDING.

*Department of the Interior.*—Cork carpet was supplied and laid, 5 window blinds, rugs, 1 hat tree, 1 desk, 1 clock, rods and curtains and several other pieces of office furniture were supplied to the Ordnance Lands Branch; partitions, electric lights, etc., were supplied and put up.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

HOPE BUILDING.

*Post Office Department.*—One steel track for filing case, 2 desks, 6 cabinets, 15 sets guides, etc., 1 cocoa mat and 3 glass plates for desks were supplied.

EGAN BLOCK.

No. 25 Sparks Street.

*Customs Department.*—325 yards of walls were washed and tinted, woodwork painted, partition and wire cage removed, 25 feet bunks erected, windows lettered and 10 lights glass put in.

*Department of the Interior.*—1 electric fan supplied, and coils bronzed and increased.

No. 41 Lyon Street.

*Customs Department.*—1 rug, 1 N.P. compression bath cock supplied; wiring for heater supplied and installed, and gas pipe repaired.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

MINES BUILDING—SUSSEX STREET.

*Department of Mines.*—2 steel 4-drawer cabinets and 1 steel card cabinet were supplied.

NO. 40 BANK STREET.

*Department of Justice.*—1 4-drawer steel cabinet was supplied.

BUILDING ON METCALFE STREET—(CORNER SLATER STREET).

*Interior Department.*—The following were supplied to the Topographical Surveys Branch: 1 marble switchboard complete, 1 electric fan, 11 chairs, 1 office stool, 1 clock, 1 desk, 11 draughting tables, 2 office tables, 1 window shade, card cabinets, etc., 1 set shelving put up, cork carpet supplied and laid, 24 feet partition put up, and several repairs were made to furniture.

*For the Surveyor General's Office.*—1 office stool, 1 chair, 6 label holders, 2 dozen aluminum shades and 1 closet bowl.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

NO. 66 QUEEN STREET.

*Department of Agriculture.*—2 steel cabinets, 4 desks, 1 map rack, 17 chairs, several filing sections, 8 electric fans, several electric fixtures, etc., 4 wire screens, 1 special glass door unit and 3 Yale locks were supplied, and 14 yards matting supplied and laid; 2 rooms were renovated, 1 small partition put up, several shelves put up, and a few other minor repairs were made.

NO. 126 QUEEN STREET.

*Department of the Interior.*—1 fanlight was constructed over doorway, 1 C. I. wash basin supplied and installed, window frosted, and considerable quantity of shelving put up for the Stationery Branch; 1 high stool was supplied for the Topographical Surveys Branch.

NO. 128 QUEEN STREET.

*Department of the Interior.*—1 truck, 12 drop lights, 3 aluminum shades, 1 name plate and 50 feet shelving were supplied to the Stationery Branch; 1 special table was supplied to the Lands Patent Branch.

NO. 138 AND 142 QUEEN STREET.

*Department of the Interior.*—1 desk, 1 bookcase, 1 truck, 1 awning, 5 window shades, 1 office stool, 2 Yale wall extension arms, 1 extension, 2 drop lights, 10 counterweight lights, 1 C.I. sink, and a few other articles were supplied to the Topographical Surveys Branch; some minor repairs were made to offices and furniture.

NO. 167 QUEEN STREET.

*Public Works Department.*—36 steel cabinets were supplied.

NO. 202 QUEEN STREET.

*Auditor General's Department.*—1 special steel cabinet was supplied.

NO. 328 QUEEN STREET.

*Department of Agriculture.*—1 gas plate and 2 stand boxes were supplied.

Work was done by the departmental staff, and supervised by John Shearer, Superintendent of Public Buildings.

REA BUILDING.

*Department of Naval Service.*—During the year, there were numerous repairs done, and sundries supplied as follows: 50 feet ⅝-inch sash cord for flag pole, 192 feet shelving made and placed; sundry other shelving and partitions were made. A plat-

form was replaced, lettering put on doors, glass put in and frosted, hardwood boards with 37 dozen hat and coat hooks attached, 6 table tops dressed; green baize door with spring and stop and bicycle rack made; 36 feet rail counter, 26 door springs, 30 foot stops, 41 Yale locks, 6 pairs doors complete, 2 plate glass shelves and 12 keys were supplied and put on; 34 steel cabinets, several steel filing sections and shelving, 1 desk lamp, 7 tables, 7 chairs, 4 desks, 45 awnings, 6 mirrors, 3 draughting stools, 6 draughting tables, 1 water cooler, 122 windows shades, 3 rugs, and several pieces of electrical apparatus were supplied.

*Department of Marine and Fisheries.*—104 steel filing cabinets and sections, 1 roller shelf case, 224 window shades, 90 awnings, 38 chairs, 1 sofa, 1 table, 6 water coolers, 1 desk, 30 cupboards, sections, bases, etc., and a considerable quantity of office furniture was supplied; 355 yards cork carpet laid, and 1,980 feet moulding put up.

Work was done by the departmental staff, and supervised by John Shearer, Superintendent of Public Buildings.

RIDEAU CLUB BUILDING.

*Post Office Department.*—8 large screens, 1 step ladder, 1 piece cork carpet, and some special sectional filing cases were supplied for the rural mail delivery; 1 desk and a few minor repairs were made.

ROYAL BANK BUILDING.

*Department of the Interior.*—11 electric light fixtures and 22 shades were supplied.

TRAFALGAR BUILDING.

*Civil Service Commission.*—150 folding tables, 21 filing sections, 1 card section, 1 bookcase, 1 set guides, 1 clock, 1 desk lamp, 40 feet electric cord and 1 annunciator were supplied; 24 feet cupboard were supplied and installed, 1 picture framed and door lettered.

*Interior Department.*—6 tables, 3 chairs, 1 desk, 5 clocks, 1 water cooler, 6 ventilators, 1 step ladder, 2 soap dispensers, 23 drop lights, 1 electric fan, 8 electric bells, 1 desk telephone, awnings, window shades, wardrobes, filing sections and a few other pieces of office furniture were supplied; repairs were made to chairs, 60 feet shelving put up, doors lettered, linoleum laid and several rooms renovated. Office furniture was moved from this building to the geodetic building.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

UNION BANK BUILDING.

*Post Office Department.*—11 chairs, 9 tables, 5 desks, 8 revolving stools, 9 bookcase sections, 1 desk rack, 2 desk trays, 2 mirrors, 1 rug, 11 window shades, 4 water coolers, 24 ventilators, 4 door springs and foot stops, 1 Yale lock, 10 coat hooks, 1 electric fan, 4 call bells and sundry electrical articles were supplied; 73 yards linoleum were supplied and laid; 1 table, 18 chairs, 6 trucks, 2 step ladders and a few other minor repairs were made. 20 4-drawer cabinets, 1 cabinet for books and a few special cases, all of steel, were also supplied.

*Department of the Interior.*—12 chairs, 6 office stools, 6 desks, 1 special and 3 draughting tables, 1 map rack, 1 easel for photostat, 5 lamps, 1 lamp shade, 3 electrical fans, 1 truck, sundry electrical fixtures, cabinets, filing sections, etc., and 6 rods and curtains were supplied; 5 rooms were washed and tinted; 70 yards woodwork painted,

22 feet shelving, 77 feet pine partition, 122 feet wood and glass partition, 100 feet arc lamp cord and galvanized iron tubing, etc., were supplied and installed; 11 steel cabinets were also supplied; 14 shelves put in, 1 wooden sink lined with lead, 4 doors lettered, electric lights and telephones re-arranged, and a few other minor repairs done.

*Department of the Secretary of State.*—Chairs, desks, blinds, curtains, 1 davenport, filing sections, 5 toilet cabinets, 5 mirrors, etc., were supplied for the Internal Affairs; 20 drop lights and 100 call bells were installed.

*International Waterways Commission.*—2 window blinds, 1 table, 1 set fire irons, 6 yards carpet, 1 rug, 1 step ladder, 1 T. W. desk, and several other pieces of office furniture were supplied Lake of Woods Technical Board; 63 feet shelving and 45 feet cupboard were put up; electric lights changed in three rooms, doors lettered, walls were washed and tinted, and several other minor repairs were done.

Work done by the departmental staff, and supervised by John Shearer, Superintendent of Public Buildings.

### NATIONAL ART GALLERY.

There was supplied 400 feet wood sheeting, quarter-round, scantling, moulding, dado moulding, black pipe for picture rods, burlap archway, painting old and new burlap; 2,000 feet sash cord, door spring, 5 boxes, renovating, etc.; 2 slate boards, 12 flag bins, 75 feet board walk, door spring and 2 locks; brackets to hold plate glass, frosting 82 panes glass, repairs to 20 chairs, new lock for main door; 2 3-light Sheffield plate fixtures, 4 tungsten fixtures, one Lynn desk lamp, one De Veau telephone (6 stations), 1 3-light Veluria fixture, 3 desks, 2 chairs, 3 cushions, one rug, one 20th century water cooler, 12 towel holders, 12 waste baskets, bases and top and sections, 2 tables, 25 bent wood chairs, 2 kitchen tables, 18 steel cabinets, 130 steel storage cases, and several steel insect cases were delivered to the Mines Branch; and 1 steel cabinet was delivered to the National Art Gallery.

Work supervised by John Shearer, Superintendent of Ottawa Public Buildings.

### 98 WELLINGTON STREET.

*Interior Department.*—Rods and curtains were supplied; 1 chair repaired, floor oiled and walls cleaned in the office of the Chief Inspector of Surveys.

### 104 WELLINGTON STREET.

*Interior Department.*—One chair, 1 hat tree, 2 tables, 1 water cooler, 1 cushion, 1 plate glass and 4 ventilators were supplied; and repairs were made to office furniture and the building.

### 128 WELLINGTON STREET.

*Department of Railways and Canals.*—One steel cabinet was supplied.

*Royal Northwest Mounted Police Department.*—One cocoa mat, 1 desk, 2 electric fans, 1 telephone, 3 tungstoliers, 6 drop lights, 3 ventilators were supplied, and several minor repairs were made.

### 138 AND 140 WELLINGTON STREET.

*Interior Department.*—Two extension telephones and 1 water cooler were supplied to the Chief Inspector of Survey's office, and 1 clock to the Topographical Surveys Branch.

241 WELLINGTON STREET.

*Customs Department.*—One water cooler was supplied, and a hot air furnace installed.

265½ WELLINGTON STREET.

*Customs Department.*—Three chairs, 1 office stool and 2 hot air registers were supplied.

Work done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

POST OFFICE BUILDING.

*Post Office Department.*—Sixteen chairs, 2 desks, 2 tables, 2 wardrobes, 2 trucks, 1 lounge, 3 office stools, 12 bookcase sections complete, 2 map rollers, 12 ventilators, 300 brass tags numbered, 2 electric fans, 1 call bell and a few other minor articles were supplied; 10 chairs, 5 desks, 28 plates double thick plate glass, 15 panes window glass and several other repairs were made to furniture and office; 1 doorway was cut open and door supplied.

Work was done by the departmental staff and supervised by John Shearer, Superintendent of Public Buildings.

## OWEN SOUND.

PUBLIC BUILDING.

Alterations in post office; supplying four basket trucks.

## PALMERSTON.

PUBLIC BUILDING.

A contract was entered into February 15, 1915, for the construction of a public building on a site situated on the southwest corner of William and Bell streets.

The building measures 46 feet 6 inches front by 48 feet deep for the main part, two stories in height, with a one-story extension 49 feet 8 inches by 29 feet 2 inches in depth. A basement extends under the whole surface of building, covered by ground and first floors with a tower at the street corner.

The footings are of reinforced concrete, foundation walls concrete with stone facing above ground line to plinth, brick walls with rusticated quoins above plinth, cut stone sills, lintels and trimmings, parapet cornices and tower construction above roof level galvanized iron; the roof is flat, of felt, tar and gravel.

Steel columns encased in concrete and steel beams carry the wooden joists, roof timbers and stud partitions.

The basement is subdivided by brick walls and has a concrete floor. Terrazzo floors with marble border are laid in post office public lobby, all vestibules and all toilet rooms. Marble treads or steps to vestibules. Remainder of floors of birch. Moulded plaster beams and cornices in main part of ground floor. Walls and ceiling metal lath and plastered.

The basement is divided into shooting gallery with independent stairway to armoury vestibule, furnace room, fuel room and a large space suitable for storage or a recreation room for the military company. A stairway leads up into mail lobby on ground floor.

The ground floor contains vestibule under tower with entrances from both streets, post office public lobby and working space, mail lobby and platform. Entrance from Bell street, vestibule and staircase hall leading to post office public lobby and offices on first floor, toilet room, customs examining warehouse, armoury entrance, vestibule and stair to basement, armoury, C.O's. room and toilet room.

The first floor is assigned to customs long room, collector and record room, inland revenue office with corridor leading to stairhall, three living rooms and bath room for caretaker's quarters.

The tower is carried above the level of the flat roof in which is machinery room, bell chamber and dial room. The interior is sheeted, a weight box built and prepared ready for the installation of tower clock mechanism and bell.

Heating is by hot water, and lighting by electricity.

Plans and specifications prepared by Department of Public Works.

Clerk of Works, Joseph Ranton.

Contractor, A. E. Bleakney, Palmerston, Ont.

## PARKHILL.

### PUBLIC BUILDING.

Painting woodwork and papering walls in public building.

## PEMBROKE.

### PUBLIC BUILDING—ALTERATION AND ADDITION.

A contract was awarded November 19, 1914, for alterations to public building.

A contract was awarded November 27, 1914, for supply and erection of interior post office fittings.

Supplying one special bag rack, post office boxes and drawers, steel vault fittings, cabinets and brass grilles. A dumb waiter was installed between the post office and customs offices; shelving built and awnings placed on windows.

Change was made in the lavatory heating and the heating system.

### DRILL HALL.

The construction of this building, a description of which appeared in the report of 1914, is still in process of construction.

## PETERBOROUGH.

### PUBLIC BUILDING.

Furnishing and spreading gravel on lane; supplying one truck and four basket trucks.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## PETROLEA.

### PUBLIC BUILDING.

Repairing roof, putting in new plumbing and installing wrought iron galvanized handrail and supplying tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## PORT ARTHUR.

### EXAMINING WAREHOUSE.

The construction of this building, described in the report of 1914, is still in progress.

A contract was awarded October 22, 1914, for replacing the cornice, specified as galvanized iron, in stone.

A contract was awarded March 23, 1915, for the supply and installation of one passenger and two freight elevators.

### DRILL HALL.

This building, a description of which appeared in the report of 1914, is completed.

### PUBLIC BUILDING.

Painting interior and supplying steel cabinet, six-section stamp rack, four basket trucks and one step ladder for cleaning windows.

Work done under the supervision of Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## PORT COLBORNE.

### PUBLIC BUILDING.

Putting mullion and glass in front entrance door; boxes, drawers and bag rack for post office; alterations to post office box screens.

Changes in electric light wiring and fixtures, and painting interior of public building.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## PORT HOPE.

### PUBLIC BUILDING.

Building rural mail shed and hitching rings, also closet and shelving in basement.

Repairs to heating apparatus and the installation of a new radiator in vestibule.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## PORT PERRY.

### PUBLIC BUILDING.

Constructing cement sidewalk and curb; erecting fence and gates.

Supplying and sowing grass seed on lawns. Wiring clock tower for electricity and placing lights in dials; furnishing new glass for dials; changing post office boxes, and supplying tungsten lamps.

## PRESTON.

### PUBLIC BUILDING.

This building, a description of which appeared in the report of 1914, is still in process of construction.

A contract was awarded May 18, 1914, for the substitution of black slate for galvanized iron covering, etc., for main roof.

Post office boxes, drawers, brass grilles, receiver and bag rack were supplied.

A contract was awarded December 23, 1914, for the making, erecting and finishing of interior post office and customs fittings.

The bell and tower clock machinery with all necessary attachments supplied from the manufacturer. Preparing clock tower, installing dials, hoisting and placing bell and wiring tower for electricity and placing lights in dials.

## ST. CATHARINES.

PUBLIC BUILDING.

Erecting a shelter for horses and vehicles of the rural mail delivery service.

Concreting yard approach and platform to the customs examining warehouse; repairing and putting on storm sash; repairing roof; supplying and setting up stove to heat examining warehouse; alterations to screen for parcel post; making new counter with wicket and table; painting and decorating the building, and supplying four basket trucks and tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## ST. MARY'S.

PUBLIC BUILDING.

Supplying four loads of stone; re-pointing of stone work; painting of the exterior and interior of the building, and supplying one lock and lights of glass.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## ST. THOMAS.

PUBLIC BUILDING.

Furnishing two blackboards for post office notices; painting and decorating the building. Supplying floor oil and tungsten lamps; repairing furniture, and furnishing four basket trucks.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## SARNIA.

PUBLIC BUILDING.

Supplying and installing new flag pole; repairing roof. Electric wiring and fixtures in Customs examining warehouse; painting interior of building, and supplying four basket trucks.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## SEAFORTH.

PUBLIC BUILDING.

Furnishing gravel and loam and gardener's work fixing up the lawns and grounds.

Supplying and installing electric pump.

## SHELBORNE.

PUBLIC BUILDING.

The construction of this building, a description of which appeared in the report of 1911, is completed.

Post office boxes, drawers, brass grilles and receiver, also bag rack were supplied.

A contract was awarded November 3, 1914, for the supply and installation of interior post office fittings.

Construction of concrete sidewalk. The tower clock movement and bell with all necessary accessories supplied by the manufacturer. Preparing clock tower, installing clock dials, weight boxes, machinery stands, hoisting and placing bell, wiring tower for electricity, and lighting dials, also execution of painter's work. Jeweller installing bell and tower clock machinery in working order. Slight changes in electric light wiring and lights; furnishing and fitting window shades to windows, and supplying two stools, one special stool, one office clock and tungsten lamps.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## SMITHS FALLS.

### PUBLIC BUILDING—ALTERATIONS AND ADDITIONS.

A contract was entered into on April 24, 1914, for the construction of alterations and additions to the present public building at the corner of Russell and Market streets.

Alterations were made on all floors, and consist of the removal of old stairs from basement to first floor and old wood beams, vault, chimney rear wall and old wood beams and column on ground floor; on first floor, partitions and chimney at side of old stairway, partition in rear office main part of building (Customs). On attic floor chimney above this level.

The improvements on the ground floor comprise an extension to the working part of post office, new vault, toilet room, mail lobby and chimney. A side entrance from Market street enters the stair hall, with stairs up to first floor, and down to basement. Customs examining warehouse opens from stair hall; the post office public lobby is increased in area by new screen line. On the first floor, the offices are customs collector, customs long room, customs parcels office, toilet rooms, armoury and C.O.'s room, stairs to attic and other stair to ground floor. On the attic floor, caretaker's living quarters with new kitchen, bath room and bed room are provided.

A new chimney stack was built in the main part of basement, and a storage space with vault in the new addition; with stairs up to ground floor.

The foundations are of rubble stone on concrete footings; exposed walls of Perth stone to match the existing work; sloping portions of roof covered with galvanized iron; flat roof, felt, tar and gravel, and cornice covered with galvanized iron.

The interior materials consist of concrete floor in basement, steel beams, cast iron columns, Canada mosaic floors in vestibule of post office public lobby and toilet rooms; remaining floors hardwood, except portion of attic which is in spruce.

Heating is by hot water, and lighting by electricity.

Plans and specifications prepared by this Department.

Clerk of Works, J. S. Davis.

Contractors, G. T. Martin, Smiths Falls, Ont.

## STEELTON.

### PUBLIC BUILDING.

A contract was entered into November 11, 1913, for the construction of this building. The site is located on the northwest corner of St. George's avenue and John street. The building measures 49 feet 8 inches frontage by 46 feet deep, with a small one-story extension 14 feet 6 inches wide by 8 feet deep and two stories in height.

The basement is divided into furnace and fuel room with outside area entrance from yard and a large storage room with stair to ground floor. The ground floor is used for post office public lobby in which are two revolving doors connecting with the entrances from St. George's avenue and John street; working space of post office mail lobby, loading platform and toilet rooms. The stairs and hall give communication with side or private entrance door in rear and the first floor offices and caretaker's quarters. The first floor contains customs long room with a toilet room off the upper stair hall. The caretaker's quarters have reception room in the centre of the building, lighted by a skylight on the flat roof; sliding doors open into the parlour, two bed rooms are each provided with clothes closets. Dining room with cupboard and china cabinets, kitchen with dresser and door opening onto flat portion over mail lobby extension, bathroom and plumbing fixtures.

The footings for walls and steel columns are of concrete, foundation walls rubble stone with cut stone facing between grade and the level of ground floor window sills. The external walls of red brick with cut stone sills, trimmings and parapet coping; entrance steps, platform and side walls granite; flat roof, felt, tar and gravel; a central skylight is placed over the reception room. A reinforced concrete floor is made for the ground floor. The wooden structure of floor and roof joists and inside partitions is carried by four steel columns encased in concrete and steel beams. The walls and ceilings are lathed and plastered; moulded plaster cornices and beams, and plaster centres ornament the ground floor ceiling. Tile floors are laid in the post office public lobby and toilet rooms. Mail lobby, cement floor; basement floor, concrete; hardwood floor in post office working space, stair hall and first floor; panelled dado in public lobby stair hall, on stairs and in upper hall.

Heating is by a system of hot water, and lighting by electricity.

Plans and specifications prepared by Thomas R. Wilks, architect, Sault Ste. Marie, Ont.

Clerk of Works, Wm. Goodwin.

Contractors, Thornton & Woolrich.

The construction was completed during the fiscal year.

A contract was entered into November 21, 1914, for the making and finishing of interior post office fittings.

Contractors, The Berlin Interior Hardwood Co.

Post office boxes, drawers, brass plates, grilles and receivers and bag racks were supplied.

## STRATFORD.

PUBLIC BUILDING.

Repairing the heating apparatus; painting the living quarters of the caretaker.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## STRATHROY.

PUBLIC BUILDING.

Sinking the well deeper; supplying one ball cock for tank. Repairing electric wiring to take the hydro-electric current.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## SUDBURY.

PUBLIC BUILDING.

This building, a description of which appeared in the report of 1914, is still in process of construction

For the exterior facing of light area in rear of building, shale brick was substituted for stone.

The bell and tower clock movement with all necessary attachments supplied by the manufacturers.

Preparing clock tower, installing dials, erecting and placing bell, wiring tower and dials for electricity and putting in lights, and necessary painting and glazing works.

Jeweller installing bell and tower clock machinery in working order.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## TILBURY.

### PUBLIC BUILDING.

Building fence, fixing up the grounds and sowing grass seed on lawns. Constructing cement pavement; laying tile floor in the lavatory; installing pump, and supplying a wood burner for engine.

The manufacturer supplied a bell and tower clock movement.

Wiring tower and dials for electricity, installing dials, erecting and placing bell, preparing machinery stands, weight boxes and lighting dials. Jeweller setting up bell and clock works.

Furnishing blinds for windows, building one cupboard and supplying six chairs.

## TILSONBURG.

### PUBLIC BUILDING.

Repairing drain; repairing roofing and floor to belfry; fixing locks to offices in customs house; installing four outside electric lights, and making inside repairs to lighting. Execution of papering and painting works.

## TRENTON.

### PUBLIC BUILDING.

A contract was awarded July 24, 1914, for the making, erecting and finishing of interior post office fittings. Additional post office boxes, renumbering and supplying glasses for old boxes; repairing and moving radiator; altering lights in post office; painting the interior of the building and supplying three air door checks, tungsten lamps and one case for parcel post.

## TORONTO.

### CUSTOM HOUSE.

Repairs made to roofing; additional heating installed; painting and decorating interior of building and re-glazing sashes; the following furniture supplied: one wardrobe, furniture for inspector's office, one truck and window blinds.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

### EXAMINING WAREHOUSE.

Repairs to brick work, new portion of cement flooring laid and repairs made to wood floor. Racks, filing cabinets, counter guards and letter boxes were furnished.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL GARAGE.

One steel beam furnished, temporary flooring laid, new sash and an iron door put in; painting and glazing sashes and Yale keys were supplied.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

GENERAL POST OFFICE.

Repairs of a general nature were executed to this group of buildings comprised in the general post office: erecting skylight over the registration branch, altering to prevent draughts.

Removing lockers from dead letter office to new office; one step ladder for dead letter office; one Yale latch for postmaster's office; hooks and jack chain for registration department; 150 feet oak sheeting to replace glass. Lumber for general work; lumber, bolts and iron supports for making improved letter slides.

Cleaning up the yard, fixing marble in the public lobby of post office; piping and wiring from meter to connect annex with post office building, using the Toronto Hydro-electric system; piping for four electric openings. Decorating three rooms in the living apartments on top floor, painting and decorating halls and two flats of building. Painting partition at dead letter office and inquiry division; re-lettering directory board; painting in parcel post department; supply sixty-eight box keys; locksmith's work repairing keys, etc. Repairing cutting press in money order department. A uniform for the elevator attendant was provided. Cartage of large platform scale from postal station "A" to general office. Carting safe and sorting equipment to military concentration camp, Exhibition grounds; carting and installing safe in registration department.

The following furniture was supplied:—Making one oak table and filing cabinet, one special table and case for inspector's department, filing equipment, one style "B" post office truck, 3 special elm trucks; folders and sections for Chief Post Office Superintendent; 12,600 label holders, 500 steel lockers, 1 desk and chair, Chief Superintendent's department, room 8; cork linoleum for room 8; linoleum for parcel post; one table, two mirrors, six chairs for ladies' retiring room; 2 desks and chairs for inquiry division; five new blinds fitted; six window blinds and one mirror for inquiry division; four clocks for general post office; 17 collapsible sorting cases, and one tilter chair for registration department.

*Parcel Post.*—Putting new roof on the building to be occupied for parcel post business; painting screens; supplying one wall clock; taking down chimneys, repairing and stopping brickwork. Galvanized iron work on roof of building.

*Customs Postal Branch: Warden King building.*—Carpenter fitting up the interior of the Warden King building for customs postal branch; supplying and installing 48 feet of handrail; shelves and partitions in bunks; putting in galvanized iron duct; installing new plumbing fixtures in lavatories; supplying lumber and erecting a wood and galvanized iron ventilating shaft capped with star ventilator. Painting around lavatories; one sign "Canadian Customs Postal Branch." The following furniture supplied: One safe, one desk and chairs, twelve files. Removal and alterations to the dead letter office, supplying lumber for filing cases; altering wire screens, supplying lumber and carpenter work erecting partition; painting new screen. Fitting up new offices for registration department; altering wire guards, carpenter work on new screens, etc., painting and kalsomining interior; additional alterations consisting of supplying pine sheeting, carpenter's work and hardware, putting same in place, making twelve door keys. Fitting up office for registration of alien enemies; painting and decorating room, providing 18 chairs, 2 desks and filing cabinet.

Fitting up office for Department of Agriculture: Painting and decorating office, lettering door and providing one brass sign and letter box for door; supplying cork carpet and laying same; desks, chairs and office furniture complete, and two book cases made to design. Putting up new offices for postmaster and deputy postmaster: Repairing plaster, supplying lumber, carpenter's work on new screens; furnishing glass and putting same in place; painting and kalsomining works; taking up and relaying linoleum; lettering office doors and supplying Yale latches and making four mortise lock keys. Fitting up new office for post office accountant, carpenter's work and hardware and painting, varnishing and supplying glass.

Work done under the supervision of Thos. A. Hastings, Clerk of Works, Toronto, Ont.

INLAND REVENUE AND ASSISTANT RECEIVER GENERAL'S OFFICE.

Cutting out the brickwork to form two windows in the Assistant Receiver General's office, and two iron window guards placed on same. Supplying sash, casing, hardware, etc., and putting same in position, painting frames, sash, and glazing. Repairing flag pole and fixing the roof covering.

Fixing up an additional office for the gas inspection department, furnishing lumber and carpenter's work; painting and decorating large room; putting up sink and connections in office; painting and cleaning old gas inspection office to match new office.

Refitting up new office for Weights and Measures Department. Supplying lumber and erecting screen.

Furnishing one safe, desk and chair.

Carpenter taking down and setting up fixtures and supplying maple flooring.

Blacksmith repairing fire-escape.

Putting in new basin and capping pipes, cleaning and repairing the heating boilers; brass letter plate and wire box for inside face of door was supplied; frosting and lettering window, painting sheeting to match room, and supplied filing cabinets and three window shades.

Work supervised by T. A. Hastings, Clerk of Works, Toronto.

UNION STATION POSTAL STATION "A" AND IMMIGRATION DEPARTMENT.

Sheeting was provided and a screen erected by carpenter. Repairs made to roof covering. Supplying a nickle plated cock and coupling, repairing plumbing and installing basin.

Walls where broken or damaged were replastered.

A brass letter plate and wire box supplied. Stripping off old paper and tinting walls, painting nine rooms and the floors of two flats, frosting windows, painting large sitting room, supplying glass and lettering signs "Dominion Immigration Hostel."

The following furnishings were provided: 164 yards of plain linoleum, and laid; cretonne to cover screen; window shades or blinds to several windows. Furniture supplied: Desks, chairs, one tilter chair, filing cabinets, one wardrobe with mirror, changing a cabinet, guides and folders to cap size, bedsteads, springs and mattresses.

Carpenter's work in making repairs; castors, closet seat, bag racks and standard trucks supplied.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

GENERAL MATTERS.

Removal of safe from post office for shipment to Swift Current, Alberta.

Making ends for cases and supplying five hundred pieces of wood for letter boxes, supplying small hardware generally.

Painting letter boxes on Toronto island.

Painting street letter boxes and parcel receptacles, and painting large box at City Hall.

Supplying 37 basket trucks.

POSTAL STATION "B" (RENTED PREMISES).

Alterations were made to postal screen.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "C."

Repairs made to roofing, new wicket put in for parcel post.

The interior of building was painted and decorated throughout.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "D."

Painting and decorating building, staining office floor, and furnishing one rug, also two sorting cases supplied for Christmas trade.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "E," SPADINA AND OXFORD STREETS.

A new board fence was built around site for new building.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "F" (YONGE AND CHARLES STREETS.)

Setting up heating coil in lobby, installing wash basin, changing and adjusting vault lock, supplying one electric fan.

Painting and decorating the interior of the entire building.

Making wind shield frames, supplying glass and glazing them.

Constructing a combined stationery cabinet and wardrobe. Furnishing cabinet and folders and eight sorting cases. Changing and adjusting vault lock.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "G" (QUEEN STREET EAST) (RENTED PREMISES).

Postal screen extended for parcel post purposes.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "G."

A description of this building appeared in the report of 1914, is still in process of construction.

A contract was awarded January 15, 1915, for fitting up of top floor with partitions to form offices.

Presto heaters were installed in connection with the heating furnaces.

POSTAL STATION "H."

The electric wiring was changed to suit new current; reglazing of sashes. A glass sign, sorting cases, small hardware, a safe, a wall clock and window shades were supplied.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "K."

The electric wiring was changed to suit new current; one Taylor safe, wall clock, wall desk, cash drawers, bag racks, sorting sections of stamp rack, steel mats and window shades were supplied.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

POSTAL STATION "K."—ALTERATIONS AND ADDITIONS.

The reconstruction of the interior of this building for the purposes of a postal station consists of concrete walks and entrances and grading around building, wooden partition removed and replaced by steel beam and column.

Hot water heating installed; plumbing, painting, plastering, etc., caused by these changes, were repaired.

Plans and specifications prepared by James Loudon & Hertzberg, architects and engineers, Toronto, Ont.

Contractor, W. A. Warwood.

METEOROLOGICAL BUILDING.

Filing equipment, desk and chair supplied for library and office.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

STEAMBOAT INSPECTOR'S DEPARTMENT. (RENTED BUILDING.)

Brass plates and lettering furnished, window blinds supplied and put up.

Work supervised by Thos. A. Hastings, Clerk of Works, Toronto, Ont.

## UXBRIDGE.

PUBLIC BUILDING.

A contract was awarded on July 30, 1914, for raising the height of the tower of the public building.

Installing electric pump and supplying one wood burner for the "Economy" engine.

Six repair springs for door checks were furnished. Closing in louvres in clock tower. Carpenter, blacksmith, painter, and jeweller's work installing tower clock machinery and bell with the necessary accessories to make a complete outfit. Wiring clock tower, connecting motor in basement, supplying tungsten lamps and making stationery cabinet.

## WALKERVILLE.

PUBLIC BUILDING.

A contract was entered into July 18, 1914, for the construction of this building, on an isolated site or square 200 feet by 356 feet, bounded on the front by Devonshire road, rear by Argyle road, and on the side of Assumption and Brant streets.

The building measures 103 feet 6 inches wide by 76 feet deep, omitting a central light court on rear, 36 feet 6 inches wide by 28 feet 1 inch deep, two stories and basement in height.

The basement is divided into rooms for storage with vaults and stairways leading to side and rear entrances, furnace room, coal room, large toilet room and stair hall. A staircase leads up to the rear part of the post office working space.

The ground floor contains two frontal entrances with revolving doors, side entrance from Assumption street under the main stairway to first floor, post office public lobby and working space, vault, observation gallery with private stair from

rear entry, mail lobby with receiving platform, two offices for weights and measures with entry hall and rear entrance, ladies' toilet off corridor, customs examining warehouse with shipping platform and storage vault.

The first floor is assigned to customs collector, customs long room, customs parcels, customs record room with vault; inland revenue collector and inland revenue office, two unallotted offices, toilet room and wide corridor, generously lighted by skylights, giving communication to the main stairway. A separate entrance in rear with stair leads to a landing from which a large room, an armoury, opens; adjoining the main stair and on the inner end of the armoury is the C.O.'s room. A toilet room is on the upper landing of stair hall.

The footings for walls and steel columns are concrete, foundations stone, and wall above grade of Amherstburg limestone, external steps and platform on Devonshire road of limestone, from plinth to top of building light buff coloured pressed brick sills, lintels of Roman stone reinforced, bases, capitals, architraves, cornices, pediments and parapets of Roman stone; flat roof of felt, tar and gravel; copper coping, and skylights over first floor corridors.

The wooden joists, roof timbers and stud partitions are carried on steel columns encased in concrete and steel beams. The post office public lobby is laid in terrazzo, marble dado, the toilet rooms have marble skirting, cement dado and terrazzo floor, walls and ceilings metal lathed and plastered, post office ceilings and beams are ornamented by moulded plaster cornice.

Heating by a system of hot water, and lighting by electricity.

Plans and specifications prepared by this department.

Clerk of Works, Clair A. Williamson.

Contractors, Pigott & Healey.

## WATERLOO.

PUBLIC BUILDING.

Removal of old floor and laying of new pyrofugont floor. Furnishing four door checks, putting them on and repairing door.

## WELLAND.

PUBLIC BUILDING.

A contract was awarded October 28, 1914, for alterations and additions to interior post office fittings. Alterations were also made to stamp vendor's office. Electric wiring to new screen; supplying post office boxes. Constructing an outside porch to building, changing basin in post office; extension of gas service, and supplying one bag rack, two door checks and tungsten lamps.

## WHITBY.

PUBLIC BUILDING.

Spreading gravel on driveway; repairing vault door; papering and painting of kitchen with pantry, dining room and parlour; linoleum for wicket.

## WINDSOR.

PUBLIC BUILDING.

Repairing slate roof; painting inside and outside and decorating the entire building; repairs to table; supplying and laying linoleum and two rugs for offices of Inland Revenue; cleaning two rugs, and furnishing four basket trucks.

## WINGHAM.

PUBLIC BUILDING.

General carpenter jobbing work, extension of weight boxes and repairs to brickwork. Replacing broken glass for clock dials; jeweller installing bell and tower clock movement in running order; wiring tower and dials, and placing lights for electricity.

## WOODSTOCK.

PUBLIC BUILDING.

Ornamenting grounds by planting flowers in beds and spreading gravel on roadway; repairs made to roofing; putting in new section to heating boiler and installing new wash basin; painting letter boxes.

# PROVINCE OF MANITOBA.

## BRANDON.

EXPERIMENTAL FARM—HORSE STABLE.

The construction of this building, which was described in my report of 1914, is completed.

Plans and specifications prepared by this department.

Contractors, The Brandon Construction Company.

PUBLIC BUILDING.

Fittings for parcel post service installed, and minor repairs and changes were made to heating apparatus in customs examining warehouse.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## CARMAN.

PUBLIC BUILDING.

Post office interior fittings supplied and installed.

The construction of this building which was described in my report of 1914, is completed.

Plans and specifications prepared by this department.

Clerk of Works, James Brown.

Contractors, Snyder Brothers.

## DAUPHIN.

PUBLIC BUILDING.

Alterations and repairs made to hot-water boiler and to heating system.

In the Dominion Lands Office, the counter was altered, a glazed partition erected and a sign painted on door.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## EMERSON.

PUBLIC BUILDING.

A soft-water cistern of reinforced concrete was made and same filled with river water.

Water closets repaired; hot-water system had alterations and addition made, and walls and ceilings of customs rooms were kalsomined.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## MINNEDOSA.

PUBLIC BUILDING.

The tower clock and bell were placed in the tower of building, in proper running order.

The post office fittings were supplied and installed complete, and two gasoline lamps supplied.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## MORDEN.

PUBLIC BUILDING.

Post office fittings have been supplied and erected, and a soft-water cistern has been installed.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## NEEPAWA.

PUBLIC BUILDING.

Stone work at entrance of building was repaired, and a new w.c. inclosed with wood partitions was installed in basement.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## NORTH TRANSCONA.

GRAIN INSPECTION BUILDING.

A building for the inspection of grain was constructed on a site of land known as that portion of the northwest quarter of section 18, township 11, range 4, East.

The building measures 36 feet front by 20 feet deep, having one story frame walls, partitions, joists and roof material on a concrete foundation, shingle roof and clapboarded walls.

The ground floor contains: Entry, large and small offices with locker room and lavatory adjoining.

Plans prepared by H. E. Matthews, Resident Architect, Winnipeg, Man.

Contractor, D. H. Barlow, 730 Beverley street, Winnipeg, Man.

## PORTAGE LA PRAIRIE.

PUBLIC BUILDING.

Hot-water heating apparatus and plumbing work repaired, and desk and table provided for parcel post service.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

BUILDING ON TUPPER STREET.

Is a rented building, for postal, express and examining warehouse purposes.

Partitions, counters and shelving have been installed, and a stove was erected complete.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## SOURIS.

PUBLIC BUILDING.

Some new partitions were put up in customs offices; sundry electrical work was done, and the whole place renovated and redecorated.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

## STONEWALL.

PUBLIC BUILDING.

The construction of this building, which was described in my report of 1914, is completed.

Plans and specifications prepared by F. C. Sullivan, Architect, Ottawa, Ont.

Clerk of Works, Thos. H. Woods.

Contractors, Cooper, Cooper & Watts, Stonewall, Man.

A new clock was installed in front of building over the main entrance.

## VIRDEN.

PUBLIC BUILDING.

A contract was entered into on June 2, 1913, for the erection and completion of this building, which is situated on a plot of ground 100 by 117 feet on Nelson street, near Seventh avenue. The building measures 60 feet 8 inches by 54 feet 4 inches, comprising basement, ground, first and attic floors. The foundations and footings for steelwork are of reinforced concrete to ground line, above which is cut-stone and brick walls with stone courses and trimmings to top of clock tower which is on the corner of building over main entrance. The basement plan shows furnace room, coal room and storage rooms and has concrete floors graded to floor drains. A horizontal electric pump, with connections to a well outside of building, is situated in corner nearest well. Stairs lead up about centre of building to ground floor which is used as post office, working space, public space, corridors, with terrazzo floor and cement dado. Weights and measures rooms, examining warehouse having wood floors; mail entrance, with cement floor, men's toilet room having terrazzo floor; first floor is divided into customs long room, Inland Revenue rooms, Customs Collector's office, women's and men's toilet rooms having terrazzo floors; attic floor plan shows janitor's living quarters. The building is heated by hot water, from furnace in basement and radiators distributed throughout the building. Modern plumbing is installed and building lighted by electricity.

Plans and specifications prepared by this department.

General Contractor, W. T. Manser, Virden, Man.

Clerk of Works, N. B. Walker.

## WINNIPEG.

DRILL HALL.

The construction of this building which was described in my report of 1914, is completed.

Plans and specifications prepared and work supervised by this department.

Resident Architect, H. E. Matthews.

Contractors, Carters-Halls-Aldinger Co., Ltd.

CUSTOM-HOUSE.

Steam heating system altered and added to; one booster pump for water service and floor plugs for lamps installed.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

EXAMINING WAREHOUSE.

Boiler No. 2 was inspected by insurance company; steam heating apparatus repaired, and additional radiation supplied.

Elevators repaired and desk lamp supplied for hardware department.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

MAIN POST OFFICE.

Lighting was altered; new partitions in basement for postal stores; new spiral chute installed from ground floor to basement; rain water system had extensive alterations, especially in basement of building; new doorway to railway mail service store room in basement; boilers were cleaned and repaired, and elevators were repaired.

Alterations made to radiators in post office inspector's office, new doorway between lavatory and postal despatch room first floor; ventilation installed in Dominion Lands office, and counter, etc., altered in Customs parcels office.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

POSTAL STATION "B."

Repairs made to sidewalk.

FOOD TESTING LABORATORY—INLAND REVENUE DEPARTMENT.

Laboratory fitted with equipment; safe provided, also refrigerator, office furniture and filing cabinet.

GRAIN RESEARCH LABORATORY—DEPARTMENT OF TRADE AND COMMERCE.

Laboratory fitted up with general and special equipment; stairs and partitions altered to adapt upper portion of postal station to accommodate two technical laboratories. Awnings furnished to windows; three stepladders supplied, also refrigerator, office furniture and desk lamp.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

POSTAL STATION "D."

Heating apparatus was repaired.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

IMMIGRATION HALLS.

In hall No. 1, alterations to electric wiring and new switches were installed.

Halls Nos. 2 and 3 had electric wiring altered, etc., to conform to Fire Underwriters' rules, and the May-Oatway system of fire-alarm has been installed.

Hall No. 1 was redecorated.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

NOTRE DAME INVESTMENT BUILDING—NOTRE DAME EAST.

This is a rented building; offices for resident engineer were taken in this building. Plans for arrangement of space, erection of partitions, counter and so forth prepared by resident architect.

Expense of actual work was borne by lessor.

Work supervised by H. E. Matthews, Resident Architect, Winnipeg, Man.

BOYD BUILDING, PORTAGE AVENUE AND EDMONTON STREET.

This is a rented building; offices for Railway Commission opened in this building, May, 1914.

Erection of partitions and necessary alterations were done by and at the expense of lessor.

Offices for Archives Department taken in the above building, April, 1914.

Erection of partitions, gilt lettering on glass door panel and so forth, carried out by arrangement with rental agents.

The plans for the arrangement of space in each case prepared by the resident architect, H. E. Matthews.

## WINNIPEG NORTH.

ARMOURY BUILDING.

This building, for which a contract was entered into on July 15, 1914, and is now completed, is situated on plot of ground on Macgregor street, and measures 180 feet by 88 feet, comprises basement, ground, first and second floors. Foundations and footings for steel columns are of reinforced concrete and concrete walls to the height of the grade line, having cut-stone plinth and solid brick walls, having bright colour inlaid tilework and stone ornamentations; the ground floor is of concrete construction, the others are of wood rafters and pine flooring; roof is of steel truss construction, with galvanized iron on mansard and felt and gravel on flat. Basement is used for men's and officers' bowling alley and shooting galleries; men's and officers' toilet rooms are situated at either end of building; men's recreation room at one end and boiler room at the other; shower baths are also installed, as well as janitor's living quarters. Stairs lead up at each end of building.

Ground floor, which is divided off into large main hall, with balcony overlooking it at both ends, one end of this floor is entirely the armoury quarters and the other, the commanding officer, stores department, etc., and armouries, mobilization stores, staff stores, quartermaster stores, leading from this floor to first floor the stairs are in hall. First floor is used as bearer section, balcony, officers' reading room, sergeants' mess, officers' mess, kitchen and ante-room, officers and sergeants toilet rooms are situated at one end and men's reading room, men's mess, men's billiard room, lecture room, men's toilet rooms. Second floor is divided into bugle band room, officers' rooms, fan room, store room, etc., in one end, band and instrument rooms and living quarters.

The building is heated from steam boilers in basement, through radiators placed in the different rooms.

Lighting is by electricity.

Plans and specifications prepared by this department.

Resident Architect, H. E. Matthews.

Clerk of Works, W. B. Rawson.

Contractors, Brown Construction Company.

# PROVINCE OF SASKATCHEWAN.

## BATTLEFORD.

PUBLIC BUILDING.

The interior of the tower was prepared for the reception of the clock machinery, by carpenter work.

The jeweller erected the clock and bell in the dial and other rooms, complete.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## GRAVELBOURG.

### POST OFFICE.

A quarter-cut oak door with hinged wicket in upper part was provided for the telegraph office. Supplying and installation of interior post office fittings. Altering the present brass letter plate to form two separate plates, making and delivering two metal letter and newspaper street posting boxes.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## HUMBOLDT.

### PUBLIC BUILDING.

Cement sidewalks from town's sidewalks to entrances laid. Providing and installing additional radiation in Dominion Lands office.

A new oak counter top in customs offices was furnished.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## INDIAN HEAD.

### FOREST NURSERY STATION.

Cleaning and painting all wood and iron work of exterior of stable, packing shed, workshop, implement shed, seed house, motor shed and boarding house. Washing, stopping and kalsomining ceilings and walls and painting all interior woodwork in boarding house.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

### INSPECTOR OF FISHERIES (RENTED PREMISES).

Supplying office furniture, consisting of filing cabinet, standing desk, typewriter desk and chair, revolving office and side chairs.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## LLOYDMINSTER.

### PUBLIC BUILDING.

Altering drain in basement and fitting closet for caretaker. Supplying turret clock and bell with all necessary accessories. Labour and material preparing clock tower for installation of clock dials, erecting and placing bell and lighting clock faces, by the builder and clockmaker. Building outside steps to basement to form an exit for the removal of ashes, rubbish, etc., and plank sidewalk to side entrance. Fitting three air valves to hot water radiators. Repairing defective electric wiring, and furnishing electric desk lamp for postmaster's office.

For pumping the water from basement, a centrifugal pump with electric driving motor was installed.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## MOOSEJAW.

### IMMIGRATION HALL.

All exterior wood and iron work including fences, painted two coats.

Washing, stopping and kalsomining the ceilings and walls and papering walls of Immigration Agents office.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

NEW PUBLIC BUILDING.

This building which was described in the report of 1912, is completed.

Plans and specifications prepared by this department.

Clerk of Works, William Tillston.

Contractors, The J. McDiarmid Company of Winnipeg, Man.

Erecting, complete, an incinerator for the disposal and burning of waste paper and rubbish.

An electric passenger elevator running from basement to third floor was installed complete.

The tower clock and bell with all necessary accessories supplied complete. Materials and labour preparing clock tower, installing glass dials, erecting and placing bell and electric lighting to clock faces.

In the public entrance, a directory board was placed and all doors throughout the building were lettered.

A contract was entered into, October 23, 1914, for the construction and erection of post office and customs fittings.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## NORTH BATTLEFORD.

PUBLIC BUILDING.

A cement walk and gutter on north side of building was laid with a cast-iron drain pipe under the street sidewalk to remove the surface water.

Concreting the surface between the street sidewalks and building was done.

The tower was finished with carpenter work and the jeweller installed the tower clock machinery in the dial and other rooms prepared for that purpose.

Changing position of electric light switches in customs office.

A contract was awarded May 21, 1914, for the making, erecting and finishing of interior post office fittings.

A contract was awarded October 26, 1914, for the supply and installation of customs office fittings.

A private office for the Collector of Customs was built by the erection of two partitions with a door and frame in each.

Furniture supplied for use in post office.

One roll top desk, two arm chairs, four stools and one desk for railway mail service were supplied.

## PRINCE ALBERT.

DRILL HALL.

This building described in report of 1914, has now been completed. The heating is done by the low pressure system, instead of hot water as in report.

Plans and specifications prepared by this department.

Clerk of Works, Olaf Albrechtson.

Contractors, Pigott and Healy.

PUBLIC BUILDING.

Plans and specifications for repairs and alterations to be made to above building for the accommodation of Government offices were prepared under instructions from the Chief Architect, and approved.

Tenders were called for and contracts awarded for the following works:—Brick and concrete work, carpentry and joinery, lathing and plastering, electrical work, plumbing and heating, painting and kalsomining.

The work consisted of the rearrangement of the entire first floor of the building for the accommodation of the Customs Department, Dominion Lands office, Forestry office, Collector of Inland Revenue and Marine and Fisheries Inspector's offices; the rewiring of the entire building in conduits and the installation of new electric fixtures throughout; the painting of all exposed outside galvanized work including the sloping roof; the insertion of four new oak doors and frames in entrances on Central avenue and Thirteenth street, and general repairs needed throughout the building.

The services of A. G. Creighton, architect, of Prince Albert, were secured to assist in the preparation of detailed plans and specification and to act as clerk of works.

Work supervised by L. R. Voligny, District Engineer, Prince Albert, Sask.

## REGINA.

### DOMINION LANDS OFFICE.

Several minor repairs made to plumbing work and clock.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

### EXAMINING WAREHOUSE.

New quarter cut oak parcels bunk in compartments with roll shutters; furniture supplied to offices; filing cabinet complete, style H truck for parcel rack, flat top desk, double pedestal typewriter desk, rotary and tilter chairs and oak folding screen were supplied.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

### IMMIGRATION HALL.

The walls of basement rendered with portland cement and sand stucco. Cleaning up basement after rain storm; providing and installing pump and valves to prevent flooding and remove water during heavy storms, from basement. The exterior walls of building were cleaned, rubbed down and painted in two-coat work. The ceilings and walls of interior were washed, stopped and kalsomined; interior wood works, etc., previously painted, cleaned, stopped and painted one coat. Minor repairs to fixtures and plumbing.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

### PUBLIC BUILDING.

Owing to the office previously used by the postmaster being situated in a room lighted by a skylight only, being very cold and draughty and entered from a short passage at the foot of the main staircase, a new office was desirable and two small rooms adapted for postmaster.

In fitting up the new office, the shelving fittings, etc., in the mail room used by the postal stores branch had to be removed and refixed in the large store room, and the walls cleaned, kalsomined and woodwork painted.

The increase in the quantity of stores carried made it necessary to enlarge the space to be occupied by the postal service branch. A storeroom 17 feet by 18 feet was fitted with shelving and divisions for the storage of string and bulky articles.

In the store room on first floor, a nest of pigeon-holes was provided. In the office of the Inspector of Weights and Measures, a radiator of one hundred feet was installed to increase the heating capacity; minor repairs made to windows, frames, doors, floor, post office fittings, tables, furniture, etc., heating apparatus, plumbing fixtures, electric lighting wiring, stamping machine and motor, locks, vaults, cutting new post office keys and electric passenger elevator. All exterior wood and ironwork previously painted

was washed, stopped, rubbed down and painted two coats. All varnished work inside and outside, cleaned, stopped, rubbed down and varnished two coats.

All defective and broken plaster work made good. The interior of building throughout had walls and ceilings washed, stopped and twice kalsomined. All painted work, including plaster base was cleaned, rubbed down, stopped and repainted.

Opening table for post office registered letter branch and unpaid money order advice case supplied to the post office money order branch.

Supplying and fitting window shade, three side chairs and one table to the postmaster's office.

One nest of shelving for storage of seed samples was supplied to the Department of Agriculture, seed branch office.

One folding screen, one oak parcels bunk with roll front, style H truck fitted for parcels rack, one flat top desk, two tilter and one typewriter chairs, one filing cabinet complete and one double pedestal typewriter desk were supplied to the Customs.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

PREMISES FOR THE ASSISTANT RECEIVER GENERAL.

The parapet wall of the above building was in a dangerous condition, owing to it overhanging towards the street, steel tie rods were inserted to hold wall in position.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## ROSTHERN.

EXPERIMENTAL FARM.

A two-story cottage 21 feet by 20 feet with a wood shed of one story at rear, 14 feet by 12 feet, with a part basement and foundation walls of concrete, was constructed of framed lumber and erected by day labour.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## SASKATOON.

FOREST NURSERY STATION.

The Forest Nursery station is situate about 4 miles to the northeast of the city.

Machine and pressure tank house, one story, lumber framed building, 34 feet by 24 feet 6 inches, with full basement, concrete walls lined inside with hollow terra cotta tiles.

The sewage system comprises septic tank of two chambers, 5 feet by 4½ feet by 20 feet deep, with 6-inch diameter overflow into storage tank 10 feet diameter, 20 feet deep, both constructed of concrete, with plank cover, the main sewer is 6-inch glazed tile drain with 4-inch branches to superintendent's and foreman's residences and machine house; there are two manholes on line of mains with heavy iron covers.

The pneumatic water supply pressure system is drawn from well, sunk by the forestry farm authorities, by a deep well power pump, driven by a 6-h.p. gasolene engine, which also drives the air compressor, the water from well is discharged into two steel riveted pressure tanks 4 feet diameter by 14 feet in length, whence the water is carried to superintendent's and foreman's residences, stable and packing shed and three anti-freezing hydrants for garden watering purposes, by 1¼-inch mains, and ¾-inch branches, in galvanized iron pipes.

Additional work digging well became necessary owing to the 5-inch diameter well tube, sunk by the forestry authorities, silting up with sand, and well had to be dug and steined at 4 feet diameter.

The work on these buildings was done by day labour.

Stationery, cupboard and shelving for superintendent's office were supplied.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

IMMIGRATION HALL.

Alterations in sanitary arrangements and lavatory accommodation in order to comply with the requirements of the city's Board of Health.

Pipe hole in chimney; fir flooring laid in kitchen and janitor's rooms on ground floor and upstairs toilet room; repairing thresholds; making and placing sixteen storm sashes in kitchen and upstairs; partition put up around bed room; changing outside closets, and whitewashing inside of building.

Plumbing work upstairs; enamelled bath, one low-down type closet outfit, one enamelled bath and wash basin in ground floor toilet room, and forty gallon boiler with connections to fixtures and range.

Repairing all plaster work, oiling all floors, painting stairway, painting ceilings and walls of kitchen partitions in janitor's room, kalsomining all ceilings and walls throughout building; linoleum for seven bed rooms and toilet room, and two metallic garbage receptacles were supplied.

Work supervised by L. R. Voligny, District Engineer, Prince Albert, Sask.

NEW PUBLIC BUILDING.

Excavation by day labour of the basement for the public building.
Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

POST OFFICE.

Repairing brickwork and roof of annex to post office.
Supplying chains and padlocks to valves of heating apparatus in basement.
Painting all exterior iron and wood work of building.
Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

DOMINION LANDS OFFICE—(RENTED PREMISES).

An office was constructed for the Dominion Lands Branch.
Sundry minor repairs were done to plumbing work and to clock.
Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

CUSTOMS—(RENTED PREMISES).

Supplying and placing fireproof safe.
Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

OFFICE OF SUPERINTENDENT OF RAILWAY MAIL SERVICE—(RENTED PREMISES).

Supplying and installing shelving and filing rack in storeroom.
Furnishing tungsten lamps.
Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## SCOTT.

EXPERIMENTAL FARM.

A herdman's cottage was erected, being one and one-half story, lumber framed building, with a part basement, foundation walls in concrete, size 35 feet 6 inches by 33 feet; building erected by day labour.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## SWIFT CURRENT.

POST OFFICE.

New parcel wicket was made. Repairing springs on front entrance doors.

Additional electric fixtures and lights installed. Painting and lettering parcel and letter boxes on streets.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## WEYBURN.

PUBLIC BUILDING.

Framed quarter-cut oak partition forming the office for postmaster was constructed. Repairs made to roof.

Removing radiator in postmaster's office and refixing in new position. Providing and installing additional radiation in Customs and Dominion Lands office.

Supplying and installing additional electric lights in post office.

Furnishing and fitting thirteen window shades in post office.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## WILKIE.

IMMIGRATION HALL.

Supplying material and constructing a picket fence on front of site with a close-boarded fence to sides and rear of property, including gates; flagpole and coal shed erected.

The walls of two living rooms in the caretaker's quarters were covered with felt paper.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

## YORKTON.

PUBLIC BUILDING.

Owing to the congestion in the post-office by homesteaders waiting to transact business in the land office, a new separate entrance was constructed to the Dominion Lands Office.

In compliance with the town of Yorkton's fire by-law, a steel fire-escape from first to second floors was erected on the building.

Supplying and installing additional electric lighting in post-office. Pigeon-hole case provided for post office. All exterior work and iron work was painted.

Work supervised by W. T. Mollard, Clerk of Works, Regina, Sask.

# PROVINCE OF ALBERTA.

## BASSANO.

PUBLIC BUILDING.

A contract was entered into August 24, 1914, for the erection and completion of a public building for post office and customs, on a site having a frontage of 75 feet on Third street, by a depth of 110 feet, facing Third avenue. The building measures 40 feet wide by 55 feet deep and consists of ground and first floors with basement.

The footings for walls and columns are of concrete; foundation walls concrete, veneered with tooled sandstone, from grade line to top of plinth course on two main elevations. The external step and landings to main and mail entrances and all external door sills are of reinforced concrete; pilasters, caps, window and door trimmings of sandstone; the outside face of walls above plinth executed with red pressed brick; the main cornice of galvanized iron with enrichments; cut stone piers and

copings to roof parapets. The flat roof of felt, tar and gravel, with skylight over caretaker's internal hall. The interior wooden floor, ceiling and roof joists, including partitions, are carried by steel beams upon steel columns encased in reinforced concrete. A tile floor is laid in vestibule, entrance stair hall and toilets on first floor, cement floor in mail lobby and entire basement. On an under-flooring to ground and first flats, hardwood floors are laid. The basement floor is divided into storeroom, men's toilet, furnace and fuel rooms, with stair to office entrance hall from Third avenue.

The ground floor contains post office public lobby, vestibule to main entrance, post office working space, vault, mail lobby and entrance to post office with door to stair hall and entrance from Third avenue; the stair leads up to first floor landing and hall. The first floor is assigned to customs long room with collector's office, ladies' and men's toilet rooms and caretaker's living quarters, comprising bath room, kitchen, dining room, two bedrooms and an internal hall or sitting room lighted by a skylight.

Heating is by hot water; lighting by electricity.

Plans and specifications prepared by Leo Dowler, Architect, Calgary, Alta.

Clerk of Works, P. J. Dewie.

Contractor, M. C. Sackrider.

## CALGARY.

### CUSTOMS EXAMINING WAREHOUSE.

This building, a description of which appeared in my last year's report, is still in process of construction.

A contract was entered into November 18, 1914, for the construction of additional marble work.

A portion of the first floor of this building was assigned for the customs long room, customs collector's office, appraisers, and record room. The office are divided by partitions composed of terra cotta and glass.

The public lobby, long room and corridor floors were laid in terrazzo, with marble border.

The walls of the long room and corridors were dadoed with marble.

The ordinary type of horizontal boilers specified have been changed to those of the fire box type, enabling the floor of the boiler room to be raised considerably.

The building foundations in Calgary, generally, are in a gravel bed through which water constantly flows, making the question of the level of the basement floor very important, especially from the standpoint of economic maintenance.

Plans, etc., prepared by this department, and the heating and lighting by Domestic Engineering Co., of Montreal, Que.

Resident Architect, Leo Dowler.

Clerk of Works, W. J. Doherty.

Contractors, Thos. J. McDiarmid Co., of Winnipeg Man.

### OLD PUBLIC BUILDING.

The old public building situated at the corner of Eighth avenue and First street east, was taken down, the material being stored on a lot adjacent to the site of the proposed Forestry and Irrigation building on corner of Sixth avenue and Fourth street west, the intention being to use this material in the erection of another building. The stone, brick and steel, etc., are piled in the open, other material liable to damage from the weather or of being stolen is stored in a wooden building erected for the purpose.

The buildings on the site purchased by the Government for an extension of this property, were pulled down and removed under contract.

Resident Architect, Leo Dowler.

MERCHANTS BANK BUILDING.

This building, situated on Eighth avenue west, has been purchased for occupation by the Assistant Receiver General.

Resident Architect, Leo Dowler.

## EDMONTON.

DRILL HALL.

For the construction of this building, a contract was entered into on the 11th July, 1914. The site of which is between Fourth and Fifth streets, Bow avenue and Churchill avenue, size is 275 feet by 170 feet. It is constructed of brick with stone sills, on concrete foundation walls, with stone facing above grade. The building contains basement, ground, first and second floors in the four corner towers only. Basement contains officers', sergeants' and mens' bowling alleys and shooting galleries, store-rooms, boiler and fan room and lavatories. Ground floor contains main drill hall 200 by 100 feet and armouries and store-rooms. First floor: lecture room, combined officers' quarters and officers' assembly rooms and sergeants' and men's recreation rooms, lavatories and caretaker's quarters. Second floors, in towers, provide store-rooms and the remainder of caretaker's quarters. Main hall is finished in brick with mastic floor and remaining portion of ground, first and second floors lathed and plastered.

Building is heated by steam, main hall with the hot blast system.

Plans and specifications were prepared by the Public Works Department of Ottawa.

Contractors, Peter Lyall & Sons Construction Company, Limited, Montreal.

Supervising Architect, E. C. Hopkins.

The building is still in progress.

## LETHBRIDGE.

PUBLIC BUILDING.

This building, which was described in my report of 1914, is completed.

An electric passenger elevator from third floor to basement was installed complete.

Contractors, Otis-Fensom Elevator Company.

Concrete sidewalks were constructed on the Government property surrounding the building on three sides.

The fittings of post office were supplied and erected complete.

Fittings were provided and installed for the customs offices.

Plans and specifications prepared by this department.

Resident architects, Charles Raley and E. E. Carver.

Contractors, Navin Brothers.

## MEDICINE HAT.

PUBLIC BUILDING.

*Alterations and Additions.*

A contract was entered into August 24, 1914, for the erection and completion of an addition and alterations in the rear of the public building, corner of Main street and Fourth avenue.

The alterations consist of the removal of the rear wall of building, partitions on ground floor and blocking up of window openings in the basement rear wall. The addition to building measures 52 feet frontage on Fourth avenue by 62 feet, the width of the present building, consisting of basement, ground and first floors.

The basement is divided into storage cellar, with stairs from storage cellar to office entrance vestibule; another stair from post office working space communicates to the mess room and toilet rooms in basement. The ground floor is used for enlarged public post office lobby, post office working space, new mail lobby, independent stair to basement rooms, office entrance vestibule, stair hall, staircase to first floor, customs examining warehouse, inland revenue long room and collector's office, toilet room and corridors.

The first floor is assigned to veterinary inspector's three offices, corridor connecting with old part of building, toilet room and caretaker's living quarters, consisting of bath room, kitchen, living room, two bed rooms and clothes closets with private hallway between the several rooms, customs long room with vault, customs collector, customs records, Dominion Lands general office, Dominion Lands two offices and toilet room in the old part of building on first floor.

The footings for walls and columns of concrete, foundation walls concrete faced with stone from grade line to top of plinth. The external walls up to the parapet are of brick similar to the present building. The rock and cut stone base, plinth, pilasters, caps, window and door trimmings, pediments and parapets harmonize with the existing work.

The roof is flat of felt, tar and gravel, with a skylight over an internal bedroom of caretaker's quarters. A new furnace chimney with stone cap has been built from the basement upwards to accommodate the changed situation of triple furnaces. The dividing walls in basement are of brick.

The steel columns and steel beams carry the wooden floor, ceiling and roof joists, wood partitions and mosaic floors. Cast iron columns at junction of old and new work are used to match present work. New steel columns are encased in reinforced concrete.

Mosaic floors are laid in public space of post office (old part), in the four main vestibules, in mail lobby and in all toilet rooms and lavatories throughout (except bath room). All joists are covered with an under and finished hardwood floor on same level with the existing work.

Heating is by hot water from triple furnaces, with a partial system of new main and return pipes in old part of basement.

The building is lighted by electricity.

Plans and specifications prepared by the Department of Public Works.

Clerk of Works, John Trimble.

Contractor, M. C. Sackrider.

## STRATHCONA.

### DRILL HALL.

This building which was described in my report of 1914, is completed.

Plans and specifications prepared by this department.

Clerk of Works, William Dietz.

Contractors, The Brown Construction Company of Winnipeg, Manitoba.

### PUBLIC BUILDING.

This building which was described in my report of 1914, is completed.

Plans and specifications, etc., prepared by this department.

Clerk of Works, D. F. McHardy.

Contractor, M. A. Pigott.

The tower, as originally built, was found to be short in height, it was removed down to the level of main cornice; the clock tower was redesigned and increased at all parts so that an additional elevation of ten feet was obtained and a better appearance given to the roof.

Contractor, W. E. Nesbitt.

### WETASKIWIN.

PUBLIC BUILDING.

This building, which was described in the report of 1914, is completed.
Plans and specifications prepared by this department.
Clerk of Works, Benjamin Miller.
Contractors, The Brown Construction Co. of Winnipeg, Man.

## PROVINCE OF BRITISH COLUMBIA.

### ABBOTSFORD.

PUBLIC BUILDING.

A clock was supplied to customs.
Wm. Henderson, Resident Architect, Victoria, British Columbia.

### ATLIN.

PUBLIC BUILDING.

Altering building to make ready for post office, etc.; erecting flag pole, installing meteorological instruments on building; general carpenter repairs; fitting up temporary post office; two galvanized iron chimneys supplied; air-tight heater furnished; general plumbing and heating repairs, and installing complete gasolene lighting system.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

### CHASE.

PUBLIC BUILDING.

Four roller awnings supplied engineer, Department of Public Works.
Wm. Henderson, Resident Architect, Victoria, B.C.

### CHILLIWACK.

PUBLIC BUILDING.

A porch was built at rear of building; new sliding receiver for drop letters at post office and floor for same was made; wiring for six light outlets, and repairs made to front doors and varnished same.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

### COMOX.

PUBLIC BUILDING.

Cementing north foundation wall; making new cold air shaft to heating furnace; erecting front and rear porches at post office, and covering rear driveway for unloading mail.
Cement sidewalk at front and one side of property; levelling grounds and sewing grass seed; making gravel roadway around rear and side of building; erecting flag pole, etc.

A contract dated July 23, 1914, was awarded for the construction and erection of post office fittings.

Boxes and drawers with keys and locks were supplied, bag rack also supplied.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## CRANBROOK.

PUBLIC BUILDING.

Alterations to roof, removing returns of cornice; providing and fixing 26 feet of eavetrough and down spout to back porch; extending concrete platform and building roof over; shortening desks, rejointing and resurfacing same; changing partition and fixtures in postmaster's office; easing front and back doors; repairing stationery cupboard; cutting down old parcel rack; supplying parcel racks, cylinder lock and door springs. Altering electrical fittings in sorting and postmaster's offices, and putting new valves on radiators.

Attending to and winding clock for the year. Bag rack supplied Post Office Department; lock boxes, drawers, grille wickets supplied, and desks, chairs and stools supplied postmaster.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## DUNCAN.

PUBLIC BUILDING.

The construction of this building, which was described in the report of 1914, is completed.

Plans and specifications prepared by this department.

Clerk of works, H. G. Savage.

Contractors, Rourke, Macdonald & Moncreiff.

A contract, dated November 24, 1915, was signed for the supply and installation of post-office fittings.

Making alterations to frame building to be used as examining warehouse; moving from site and putting in new sills, etc.

Concrete sidewalk constructed, board fence six feet high built, grading and sowing grass, gravel on drive, etc. Renumbering glass fronts, shipping from Victoria and fitting same in letter boxes. Edison Mazda lamps supplied; installing and supplying electric fixtures; system desk, office chairs, wardrobe, linoleum, door mats, typewriter desk, window blinds, shelving for vault and counter for clerk's office, Indian Department. Blinds and table supplied for post office. Making brass letter box plate with handle, and brass side to scoop at back for postal receiver.

Tower clock and bell supplied and installed, complete.

## FERNIE.

PUBLIC BUILDING.

New screen in lobby, changing money order partition, door to screen in lobby; supplying additional radiation, and ventilator in toilet door in bonded warehouse room.

Combination lock and fixing to safe; awnings for windows; changing electrical wiring, and lowering chandelier in money order office.

Extending fixtures, extra brackets and desk lights in post-office department.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## GRAND FORKS.

PUBLIC BUILDING.

Clock and bell with all necessary accessories supplied to public building; labour, etc., preparing clock tower, installing clock dials, erecting belfry, placing bell and lighting clock faces.

Material and labour supplied in connection with changing electrical work in post office.

Safe supplied Post Office Department; glazing windows, and tungsten lamps supplied.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## GREENWOOD.

PUBLIC BUILDING.

The construction of this building, which was described in my report of 1914, is completed.

Plans, etc., prepared by this department.

Clerk of Works, F. W. McLaine.

Contractors, John Burns & Son.

Turret clock supplied and installed; galvanized roof on bell tower; an eight-day clock supplied customs office; desk, revolving chair, wardrobe, armchair, hall tree, office stool, chairs, carpet square, and door mat supplied Customs Department. Revolving chair, office chairs, and door mat supplied Inland Revenue Department. Window shades furnished, safe supplied and delivered for Post Office Department. Filing cabinet for Inland Revenue Department. Filing cabinet for customs office. Lock boxes, etc., supplied post office. Erecting porch, grading and seeding grounds, and building cement sidewalk around building.

Additional work setting up interior temporary fittings in post office.

A contract dated November 26, 1914, was signed for the supply and installation of interior post office fittings.

## KAMLOOPS.

PUBLIC BUILDING.

Staining and varnishing partitions in post office; painting signs on new windows; special bag rack supplied; supplying and fitting up dominion land agent's offices in Acadian block with standing desks, cabinet, book-cases, carpet square and cork linoleum. Coat and hat trees supplied inspector of forest reserves.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

## LADYSMITH.

PUBLIC BUILDING.

General carpenter repairs; general plumbing repairs; general electrical repairs and painting street letter boxes.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

## LITTLE SAANICH.

OBSERVATORY BUILDING.

Well bored through rock 120 feet deep; pump house erected and pump installed with gasolene engine; pipe line built to location of tank and tank erected.

C. H. Topp, Clerk of Works.

## NANAIMO.

PUBLIC BUILDING.

Repairing floor; taking up old roofing on custom house building and replacing with tar and gravel; erecting registration office and desk; installing new toilet; cleaning choked sewer; installing calorimeter in Gas Inspector's office; care of tower clock and winding same for one year; flat desk made to order for collector of customs; painting letter boxes, receptacles, etc.; painting kitchen and toilet in caretaker's quarters; repairing and tinting walls, etc., of customs offices.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

## NELSON.

PUBLIC BUILDING.

Taking down porch; erecting screen for customs and inland revenue offices, repairing porch doors and flag pole; putting up storm porches; sectional bookcase supplied post office; three awnings complete supplied; transferring office and furniture of engineer of Public Works Department from Revelstoke to Nelson.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

## NEW WESTMINSTER.

PUBLIC BUILDING.

Installing 6-inch iron drain on east side of building to connect with sewer on Columbia street; installing drain and concrete gutter; erecting sidewalk from Sixth street to mail carriers' entrance and connecting rain pipes; two pole circuit breaker; supplying and fixing side entrance doors on Sixth street; additional light in machinery room; installing new seats in toilets to replace old ones; alterations and additions to chimney; additional plumbing in Mr. McDonald's room; altering and re-erecting fire-escape; renewing decayed joists on east side of building.

Constructing rest room in basement for mail carriers', with brick partition, erecting partition around money order office and laying hardwood floor, taking down old wiring, removing and re-erecting concrete retaining wall in another position. Repairing flushometer, etc.; installing 40 gallon tank in testing room; putting new rope on elevator; extra lights in Crown timber office; erecting partition in engineer's office and Crown timber agents office; mail racks supplied post office; green shades for windows; green cork linoleum supplied accountant of Department of Public Works, Dominion Lands Department, engineer of Department Public Works; desk, bookcase, tilter chair, filing cabinet, roll top desk supplied engineer of Department of Public Works; electrical heater complete with plug and cord supplied Post Office Department; cabinet, guides and folders supplied assistant postmaster; cork linoleum furnished and laid, window shades, swivel chair and cushion supplied accountant's office; hanging windows in examining warehouse; supplying bill boards, four screens, windows, repairing table and hose rack. Repainting interior of public building; painting flag pole; painting letter boxes and paper receptacles.

Alterations, etc., to this building, completed on the 15th February, 1915.

A contract, dated March 23, 1915, was signed for the construction and completion of interior post office and customs fittings.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

INDIAN AND FISHERIES BUILDING.

Taking down, recovering and repairing green cloth door; erecting partition and shelving in basement; making alterations for more convenient removal of ashes; plumbing repairs and painting flag pole. Flat top desk and chair supplied chief inspector of fisheries.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## NORTH VANCOUVER.

### DRILL HALL.

A contract was entered into April 15, 1914, for the construction of a drill hall on a lot situated at the corner of Fifteenth street and Forbes avenue, adjoining Mahon park.

The building is 86 feet wide by 132 feet 4 inches long, consisting of basement, ground floor (drill hall level), and first floor.

The footings and foundations to plinth are of concrete waterproofed by a coat of tar; from plinth to top of building, the walls are of red facing brick with cement sills, copings and trimmings; three chimneys on end gables provide for the heating apparatus.

The steel trusses carried by external buttresses and walls support a wooden roof of rafters, boarding and galvanized iron covering laid on roofing felt.

Steel floor beams under the armouries and longitudinal wooden girders supported on concrete pillars on footings, carry the wooden floor joists of drill hall. All joists covered by an under-floor and finished hardwood floor.

The interior walls of drill hall are finished with red facing brick and sheeted on the wooden partitions at end of drill hall. The rooms are lathed and plastered, with wood finish to doors and windows. Basement windows are provided with area walls of concrete.

Furnace and fuel room plastered ceiling, rifle range ceiling two-inch plank, large windows in side of drill hall have steel frames and sashes.

A concrete duct passes across the gun shed and foundation under drill hall to provide for an 18-inch diameter cast iron pipe embedded in concrete for creek to flow through.

A portion of the basement at one end of the building is divided into furnace and fuel rooms, store rooms, two toilet rooms on either corner of basement, rifle range and two stairways, one stair to furnace and fuel room and the other to rifle range and store room with egress to the drill hall.

The gun shed, on a portion of the west side of basement, is 102 feet long by 20 feet deep, with a wagon floor of 80 feet by 20 feet; six double entrance doors open towards the lower side of lot.

The drill hall is 80 feet wide by 103 feet 11 inches long with double entrance doors to north and west sides on Fifteenth street and Forbes avenue.

At the rear end of drill hall and opening into same are six armouries, one stairway at either side of hall gives access to a gallery at one end overlooking the drill hall.

The gallery on first floor adjoins and is the communication between the officers', sergeants' and men's rooms and the stairways.

Heating is by two heaters connected to two flues in gable end walls in drill hall. Two hot air furnaces in basement with registers to rooms above. Lighting is by electricity.

Plans, standard drill hall type "C," and specifications prepared by the Department of Militia and Defence.

Clerk of Works, Henry Blackadder.

Contractors, A. Campbell & D. H. Wilkie, Vancouver, B.C.

A contract was entered into July 22, 1914, for additional concrete walks to above building.

Contractors, Campbell & Wilkie.

The drill hall grounds were cleared of brush, etc., during the building operations.

## PENTICTON.

### PUBLIC BUILDING.

Crating and shipping safe.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B. C.

## PORT ALBERNI.

### PUBLIC BUILDING.

A contract was entered into on April 28, 1914, for the construction of this building situate on a plot of ground 65 44 feet frontage by 125 feet deep to a lane on the corner of Third avenue and Angus street.

The building measures 35 feet 6 inches wide by 63 feet long; main portion being three stories high and basement with a one story wing 35 feet 6 inches by 22 feet 6 inches deep.

The foundation is of concrete with rock-faced, coursed stonework above the ground line to plinth course, and concrete footing under walls and steel columns. The exterior walls are of red pressed brick with basket weave ornamental course at first floor level and cut stone trimmings.

A clock tower of two stories, with four dials, is over the entrance at the corner of Third avenue and Angus street.

The pitched roof is covered with slate, galvanized iron cornices around roof, examining warehouse wing is roofed with felt, tar and gravel.

The interior construction is of steel beams and columns, wood joists and floors, metal lath plaster walls and ceilings. Roof timbers wood, basement floor concrete.

Tile floors in post office, public lobby, vestibules and all toilet rooms.

Basement is divided into fuel bin, one vault, furnace and storage space. The level of the examining warehouse floor is lower than the ground floor of main part of building, therefore the basement of wing is not excavated.

Ground floor plan shows post office, post office working space, vault, mail lobby lift to customs offices, public lobby vestibules, and on a lower level the customs examining warehouse.

The first floor is divided into offices for customs collector, customs long room, vault, postal packages, with a lift connecting with post office working space, telegraph men and women's lavatories, corridor and staircase hall.

The second floor is used as caretaker's quarters, consisting of six living rooms and bath room. Two separate toilet rooms are provided, opening off the main stair landing. The clock machinery room is on this floor, and the tower is provided with bell chamber and dial room over same.

The building is heated by hot water from twin connected furnaces and lighted by electricity.

Plans and specifications prepared by Wm. Henderson, Resident Architect, Victoria, B.C.

Clerk of Works, A. B. Wood.

Contractors, Knott & Jones.

The construction was completed on 15th February, 1915.

Supplying and laying 5-inch tile drain around public building; tower clock supplied and installed; temporary fittings installed, stained and varnished; making cases and packing post office fittings and shipping same, and window shades supplied.

A contract dated March 23, 1915, was awarded for the supply and completion of post office and customs fittings.

## PRINCE RUPERT.

### DRILL HALL SITE.

The grading for drill hall site which involved the moving of some forty thousand yards of solid rock, was undertaken and carried out as far as the appropriation would permit. This work is approximately three-quarters completed, and is in such a position that it can be easily gone on with as soon as the Department decides to proceed with it. It was done under the supervision of Mr. M. J. McNeil, foreman for the department.

G. B. Hull, District Engineer, Prince Rupert, B.C.

### IMMIGRATION BUILDING.

A temporary immigration shed was build on the Grand Trunk Pacific wharf at location provided by the railway company. This building is 73 by 33 feet, one and a half stories high, of frame construction, plastered and painted with the proper signs thereon. Strong rooms for male and female prisoners were also provided. The necessary furniture and fittings were also purchased and placed in the building by this department. This work was done by Mr. George H. Munro.

G. B. Hull, District Engineer, Prince Rupert, B.C.

### PUBLIC BUILDING.

The necessary excavation for basement on the proposed new post office site was completed, which finishes all the grading necessary ready for this building. Owing to the fact that the excavation filled up with water it was necessary to install a small electric pump and keep same pumped out. This was due to police regulations which required the sidewalk to be replaced as well as the excavation kept dry previous to the construction of the building. This work was done under the supervision of Mr. M. J. McNeil, foreman for the department.

G. B. Hull, District Engineer, Prince Rupert, B.C.

### QUARANTINE STATION.

At the quarantine station on Digby island, this office has looked after the general laying out of the station as well as the construction of necessary roads and bridges. This work involved the clearing of the site for the detention buildings, the construction of a residence for the medical officer and the clearing of approximately thirteen acres of very heavily timbered land, as well as the laying out and grading of approximately 2,157 feet of roads, together with the construction of a pile trestle and lift bridge, 672 feet long connecting the main station with the island on which the quarantine hospital is situated. The roads are 20 feet wide and extend from the south approach of the quarantine wharf to the hospital island.

This work was done under the supervision of Mr. Phil. McDonald, foreman for the department.

G. B. Hull, District Engineer, Prince Rupert, B.C.

### MERRYFIELD BUILDING—RENTED—CUSTOMS EXAMINING WAREHOUSE.

This building is leased from Mr. J. E. Merryfield.

The building was equipped as an examining warehouse, and the window sign written.

G. B. Hull, District Engineer, Prince Rupert, B.C.

FEDERAL BUILDING (RENTED)—OWNERS, NORTHERN BRITISH COLUMBIA DEVELOPMENT COMPANY.

The offices occupied in this building are the post office, custom house, district engineer, inland revenue and harbour master.

The maintenance and repairs of the post office as well as other minor changes, including alterations in the lighting system, together with necessary lamps and the purchasing of post office furniture and equipment have been attended to.

A safe was purchased and installed in the customs annex.

Electric lighting was installed in the harbour master's office to suit.

G. B. Hull, District Engineer, Prince Rupert, B.C.

RENTED BUILDING.

Flat-top desk, desk chair, office chairs and wheeled trucks were supplied collector of customs.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## REVELSTOKE.

PUBLIC BUILDING.

Roll-top desk and chair supplied homestead inspector; safe supplied to post office; carpet square, table, filing cabinet, book-case and map sections, chairs, hall rack, desk, typewriter desk, flat-top desk and chairs supplied office of Dominion land agencies.

Transferring office and furniture of engineer, Public Works Department, from Revelstoke to Nelson.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## ROSSLAND.

PUBLIC BUILDING.

Repairs to roof main deck, changing doors, etc., and general carpenter repairs and alterations to interior plan of building.

Electrical work repairing and installing. Linoleum, brass binding, window blinds, chair slides and cork carpet were supplied to postmaster. Mazda lamps furnished, and interior of building was painted.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## UNION BAY.

PUBLIC BUILDING.

Erecting front and rear porches covering rear driveway for unloading mail at post office; drained property, making outlet to water front; levelling grounds and sowing grass seed, making gravel roadway around rear and sides of building; erected board fence and painted picket fence; erected flag pole.

Installing water system, digging and finishing well, post office boxes, drawers, keys, etc., supplied.

A contract was awarded July 23, 1914, for the erection and completion of post office fittings. Bag rack was supplied.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

## VANCOUVER.

OLD POST OFFICE BUILDING.

Carpenter repairs; door and frame, including door jambs, jamb linings, casings, stops of oak and glass supplied. Making new frame and skylight and hinged to roof.

Hardware, bolts, nails, etc. Skylight grille provided; repairs to iron gates and new gates made and erected. Hot-water heating system repaired, plumbing alterations and electrical work done in assay office; oak panelling, tables and screen supplied and fitted in assay office. Removing and connecting furnace and supplying one cast-iron table top. Covering three furnaces with reinforced asbestos cement. Supplying and fixing 50-gallon galvanized boiler with water supply, etc. Renewing gutter and cornices on building. Cement and plaster work repaired in building. Glass lights supplied; painting of flag pole, woodwork in assay office and floor of melting room. Building lockers in attic, putting locks and bolts on switch boxes. Two drawer card cabinet supplied to electrical standard laboratory. System desks, chairs, tilter chair, revolving stools, tables and sectional bookcase were supplied gas and electricity inspector.

Window shades provided for janitor's quarters.

Linoleum and gas stove for assay office.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

PUBLIC BUILDING.

General plumbing repairs; Gurney boilers supplied and installed complete; brass sign supplied; painting flag pole; winding and attending to tower clock; repairs to clock, roll-top desk and chair; repairs to motor stamp machine; repairs to toilet and hanging two windows in basement lavatory; putting shelves with sliding doors in telegraph office in lobby of building; fixing bag racks; repairing trucks and floor; putting up string spools, etc., in despatch office. Cutting opening through brick wall and trimming same with door frame and casing; painting letter boxes and receptacles; cleaning and repairing brickwork of chimney; repairing prism lights and sidewalk over basement; bicycle stand, fuses, Rex and Mazda lamps supplied; fixing electrical buzzer in postmaster's room; repairs to post office boxes and making keys; fixing delivery wickets, putting in new counter glass, and draught strips to window casings, easing doors, etc. General carpenter repairs; making 36 boxes for parcel post. Inlaid linoleum for passenger elevator furnished and laid; taking cases and tables from attic, setting same in position in main corridor and storing in attic again after Christmas. Stationery cupboard and flat top desk supplied; repairing and putting new locks to 178 letter drawers, etc., repairing small letter freight elevator and dumb waiter and supplying thrust plates and other material. Furniture, typewriter desk and chair, wardrobe complete with ends, transfer cases, steel cabinet, etc., supplied post office inspector. Sanitary roll top desk, tilter chair, one stationery cabinet supplied superintendent dominion public buildings in Vancouver. Filing cabinet and supplies, office flat desk, chairs, tables, cabinet safe, four drawer cabinet with ideal indices, metal top guides and folders supplied superintendent of dredges in Birks building.

Installing switches, pendant switches, etc., in long room of customs department, wiring for twelve lights in customs parcel post department; putting on door checks in offices; flat top desk supplied surveyor of customs.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

NEW EXAMINING WAREHOUSE.

Inspecting and reporting on four elevators. Increasing the height of chimney stack 10 feet; new plumbing, etc., provided and installed; cutting out wall and putting in door to elevator tower; removing arches in front of boilers and building in new ones and filling in around boilers; installing push bell system for elevator, putting glass in bookcase, casters on four tables and repairing chair; inserting glass in screen, and in gauger's room; repairing overhead gearing, renewing cables on three freight elevators and adjustments to operating gates; adjusting guide shoes and electric bell system on passenger elevator. Repairing cement floor; taking down ceiling radiators, repairing leaks and fitting back to ceiling. Mazda electric lamps

supplied, and wiring for six lights and three switches. Wardrobes, ordinary chairs, tables, desks, cabinet, manifest table, linoleum, etc., supplied customs offices.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

SUB-POSTAL STATION "A."

Special bag rack of 282-bag capacity and sorting table complete on platform with rubber-tired casters were supplied.

Standing desk 6 feet long, flat desk, and waste-paper baskets supplied.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

SUB-POSTAL STATION "B."

Special bag rack for post office, covering glass panels in door with wire, putting iron bars on transom and two windows for burglar protection; easing doors and putting glass in skylight; putting on door springs and check to entrance door, cutting floor for register from furnace room. Flat desk, tilting chair, side chair, stationery cabinet and linoleum supplied; roll top desk, flat top desk, typewriter desk, tilter chair, side chair, stools, wardrobes, bookcases, card cabinet, and safe supplied Inland Revenue Department; cork linoleum and Wilton rug supplied engineer's office. Six portable electric lamps furnished hydrographical survey office.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

POSTAL STATION "C."

A contract was entered into on July 17, 1914, for the construction of a building on a plot of ground 88 feet frontage by 73 feet deep, being the southeast corner of Main, Fifteenth and Howard streets.

The building occupies the entire size of the property with the exception of the recessed portion in front, and has basement, ground, first and attic floors; is built of stone and brick with reinforced construction.

The footings for steel columns, internal and foundation walls are of concrete and basement walls of concrete. External face of basement walls from grade line to sills of ground floor window are encased with selected Denman Island stone, above this point all trimmings and mouldings, including cornices and clock surroundings at the springing of the tower roof, are built of Haddington Island stone; walls on the three street fronts of pressed Roman facing brick.

The main walls to first floor and columnar trimmings are of cut stone backed with brick above this level, including the rear and end walls, which are brick.

The interior constructional materials are of reinforced concrete for columns and floors, with maple and fir floors laid on sleepers. Inside face of outside walls furred with wall tile. Main stairs of steel with marble treads to first floor level, ground floor marble dado, all plaster finish above dado except pilasters and columns which are of Caen or Verona stone.

The post office public lobby is covered with ceramic mosaic tile with border.

A cork linoleum is laid in the post office working space inside of screen. The toilet room floor is of cement tiles.

The basement is divided into furnace and fuel rooms, with ash hoist, motor vacuum cleaner room and men's toilet.

On the ground floor, accommodation is allotted to the post office public lobby, stair hall and mezzanine floor between ground and first floors for postal observation gallery, while main stairs lead up to second floor and down to basement, and contains post office working space, large vault, mail lobby with hood covering sidewalk, rear entrance and rear stairs up to first floor and down to furnace room, and ladies' toilet.

The first and attic floors are not yet assigned or subdivided by partitions.

The tower and space on attic floor adjoining is to be used in connection with the motor and ventilating apparatus.

The floors in tower above attic are for clock and dial machinery and ventilating shafts.

A system of ventilation is provided.

The building is heated by hot water, and lighted by electricity.

Plans and specifications were prepared by A. Campbell Hope, architect, of Vancouver, B.C.

Clerk of Works, O. Charles Graham.

Contractors, T. J. Whiteside & G. E. Williamson, Vancouver, B.C.

IMMIGRATION AND DETENTION HOSPITAL.

This building described in report of 1914, is still under construction and good progress is being made. The plastering is finished and the whole work is nearing completion.

A contract for additional works to the main contract was signed September 26, 1914.

The contract for the supply and installation of a passenger elevator was signed March 24 1915.

The poles and lines at the above property were removed by the Canadian Pacific railway.

A hospital sterilizer was furnished and delivered.

Steel cabinets, Yaw Manote transfer cases, card index cabinet, card cabinet and guides supplied for immigration office.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

EMPIRE BUILDING.

A four-drawer cap-size filing cabinet, transfer cases and cards, window shades and linoleum furnished and laid in lecture room to offices.

Special 8-foot fir table, with two drawers, small chairs and bookcase outfit furnished.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

## VANCOUVER NORTH.

PUBLIC BUILDING.

Awnings supplied for postmaster.

Wm. Henderson, Resident Architect, Victoria, B.C.

## VERNON.

PUBLIC BUILDING.

Repairing cable and winding postoffice clock.

Wm. Henderson, Resident Architect, Victoria, B.C.

## VICTORIA.

OLD POST OFFICE BUILDING.

Erecting partition to form a dark room and supplying interior fittings in office of commissioner of wrecks and examiner of masters and mates.

Repairing and recovering roof of building. Painting flag pole.

Changing switching arrangements and wiring for extra electric lights and switch in rooms of commissioner of wrecks, etc.

Rewiring with conduit, the store-room in old post office.
Performing alterations, etc., in carpenter work.
Repairing brickwork of old chimney stack.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

TEMPORARY EXAMINING WAREHOUSE—RENTED.

Fixing and repairing table.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

IMMIGRATION DETENTION BUILDING.

Replacing wire screen with iron bars, etc.; resetting basin; repairing and covering two boilers; flag pole painted; painting interior; steel cabinets supplied.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

OLD CUSTOM HOUSE.

Taking out old sink waste and running new cast iron pipe. Taking down flag pole, fixing sheath, replacing pole and fixing halyards, etc., painting flag pole.
Chart cabinet, steel vault truck and chart case supplied Agent of Marine and Fisheries.
Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

BELMONT BUILDING—RENTED.

Moving some fittings for customs department from post office building to make temporary fittings for postal parcels and express department.
Installing lights in basement for postal parcels and express department.
Repairing taps, urinals and toilets, relining old tank and repairing fittings.
Special steel truck supplied customs.
Wiring for and installing electrical signals from customs collector's office to long room, also repairing wiring and telephones.
Work supervised by William Henderson, Resident Architect, Victoria, B.C.

OBSERVATORY BUILDING—GONZALES HEIGHTS.

Building concrete seismograph piers on to rock. Laying walk on roof and supplying automatic pumping outfit.
Supplying bookcases and wardrobes. Filling and levelling floor and grading coal cellar approach.
Wiring and fitting bell; electrical work done and tungsten lights supplied; erecting store room under basement, and fitting up interior.
Drilling well for building, laying water pipes, and installing conduit for signal wires.
Wire mats, fibre mats, mattresses, oak umbrella racks, linoleum and window shades supplied.
Work supervised by William Henderson, Resident Architect, Victoria, B.C.

PUBLIC BUILDING.

General carpenter repairs; taking out old treads on main stairway and replacing them with oak; putting on new halyards to flag pole; repairing steps at entrance and fixing springs on doors.
Taking out glass, inserting a new ventilator in skylight over sorting room, cutting glass to suit and refixing.
General plumbing repairs. Installing gas pipe, etc., to gas inspector's office.
General electrical repairs. Altering main switch and cutting out wiring in basement to clear ventilating pipes; installing lights, supplying opal shade, lamps, etc.

Installing one four-sweeper "Tuec" vacuum cleaner. Repairing, inspecting and oiling various elevators in building, changing, repairing and replacing field coil on passenger and mail elevators. Supplying and putting on new §-inch cable on passenger elevator.

Shellacking and varnishing new oak treads to main stairway. Painting flag pole.

General carpenter repairs to post office, fixing temporary fixtures for Christmas trade; supplying oak screen in post office lobby, altering tables, fixing slides in tables, fixing and repairing drawers, trucks and doors, fitting and repairing registry office.

Altering grille gates on oak screen; steel locks supplied. Taking out, repairing and replacing armature on mail elevator. Electrical alterations in general post office. Painting post office boxes and parcel receptacles; furnishing pigeon-hole case with three shelves for registry department.

Cleaning carpets and supplying stools; Boss cone heater, etc., supplied post office sorting room.

Sliding shelf and card index drawers supplied gas and electric inspector of the Inland Revenue Department. Flat-top desk, tilter chair, sectional bookcase furnished weights and measures offices.

Special type cabinet for typewriter and chair for resident architect's office of the Public Works Department.

Cork linoleum laid and supplied for engineer's branch.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

DRILL HALL—ADDITIONS.

This building, which was fully described in the 1914 report, is still in process of construction.

A contract was entered into on August 1, 1914, to build a one-story addition at either end of the main drill hall, on first floor level, to provide accommodation for a Highland regiment.

The additions are each 101 feet by 28 feet over the one-story portions.

The design and materials to be similar to the present structure.

Plans and specifications prepared by W. R. Wilson, architect, Victoria, B.C.

Clerk of Works, George Jeeves.

Contractors, Parfitt Bros.

## WILLIAM HEAD.

QUARANTINE STATION.

Slates were supplied; alterations and additions to engineer's house; general alterations, etc., to steward's quarters, power house, recreation hall, bath houses, laboratory, meat house, second class building, captain's house, electricians' house, superintendent's residence, assistant superintendent's residence, laundry, engineer of steamer *Gunhild*, watchman's house and cold storage building.

Six trough closet ranges each for eight persons; clearing stoppage of sewer and installing new trap. Two battery charging regulators, circuit breakers, high tension automatic switches, repairing and remodelling electric service. Installing lights, replacing burnt cells in armature and general repairs, etc. Three flag poles and two smoke stacks painted. Window shades, curtains, tables, chairs, cocoa matting, rugs, mirrors, mattresses, pillows, sheets, blankets, bedspreads, beds, tables, card tables and writing tables were supplied.

Work supervised by William Henderson, Resident Architect, Victoria, B.C.

# STATEMENT OF LEASES

OF

# BUILDINGS AND GROUNDS OCCUPIED BY THE GOVERNMENT

AND

# PAID FOR BY THE DEPARTMENT OF PUBLIC WORKS

BY

J. G. TAYLOR

OTTAWA, September 9, 1915.

E. L. HORWOOD, Esq.,
Chief Architect,
Public Works Department.
Ottawa.

DEAR SIR,—Annexed, please find details of arrangements under which rents are paid for buildings and sites by the Department of Public Works; also index of the names of lessors.

The list shows that 289 places are leased. The total rent paid per year amounts to $646,681.91.

Of this sum—

| | | |
|---|---|---|
| $ 40,402.15 | is paid for premises and sites in | Calgary, Alta. |
| 400,369.21 | for premises in | Ottawa, Ont. |
| 47,300.42 | " | Montreal, Que. |
| 8,840.00 | " | Quebec, Que. |
| 14,143.20 | " | Saskatoon, Sask. |
| 17,445.00 | " | Toronto, Ont. |
| 14,149.63 | " | Vancouver, B.C. |
| 18,010.16 | " | Winnipeg, Man. |

Yours truly,
J. G. TAYLOR.

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## LEASES.

*No. 1.—Annapolis Royal, N.S.*
Two rooms on ground floor of lessors' building on St. George street.
Occupied by: Inspector of British Immigrant children and of Immigration Agencies for Maritime Provinces.
Lessors: Fortier Bros.
Term expires: 1st September, 1916.
Rent: $15 per month.
Lessors pay all taxes including water, heating, lighting and cleaning.

*No. 2.—Asbestos, P.Q.*
One room on southeast side of lessor's building 20x22 feet.
Occupied by: Post Office.
Lessor: La Compagnie Artistique et Financiere d'Asbestos, Ltd.
Term expires: 5th April, 1916, and thereafter from year to year on same terms, lessee has privilege to end lease at end of any year by giving notice on or before 5th January.
Rent: $200—$200 by government and $100 by postmaster.
Lessor pays all taxes, heating, lighting and snow cleaning.

*No. 3.—Asheroft, B.C.*
Store room in building owned by James Haddock, of Ashcroft B.C.
Occupied by: Store room on main.
Lessor: Inland Express Co., Ltd.
Term expires: Monthly. This is a sub-lease.
Rent: $25 per month.
Lessor pays heat, light and caretaking.

*No. 4.—Athabaska, Alta.*
Piece of land fronting on Athabaska river, 100 by 150 feet.
Occupied by: Immigration hall
Lessor: The Governor and Company of Adventurers of England trading into Hudson bay.
Term expires: June 1, 1918.
Rent: $1 per annum.
Lessors stipulate that no lumber shall be cut.

*No. 5.—Athabaska, Alta.*
Space in warehouse.
Occupied by: Post Office mail storage.
Lessor: Revillion Bros.
Term expires: At one month's notice.
Rent: $5 per month.

*No. 6.—Athabaska Landing, Sask.*
Lease since cancelled.
Occupied by: Post Office.
Lessor: Geo. H. Long.
Term expires: In 1 year from date of occupation.
Rent: $50 per month.
Lessor pays taxes.

*No. 7.—Battleford.*
Lots 41 and 42 South Twenty-four street, west of Central avenue.
Occupied by: Immigration.
Lessor: Town of Battleford.
Term expires: April 29, 1919.
Rent: Amount of municipal taxes.

*No. 8.—Beauharnois.*
Two rooms and one toilet room on west side of lessors building, southeast corner of Ellice and Brown streets.
Occupied by: Post Office.
Lessor: J. Lionel Leduc.
Term expires: May 1, 1917.
Rent: $350 per annum, of which Public Works Department pays $225 and Post Office Department pays $125.
Lessor pays all taxes, street sprinkling, heating, removal of snow and lighting.

No. 9.—*Berlin, Ont.* . . . . . Store in rink and auditorium block on Queen st. south, with use of basement—840 square feet on ground floor.
Occupied by. . . . . Exam. warehouse.
Lessor. . . . . Berlin Rink and Auditorium Co., Ltd.
Term expires. . . . . 15th February, 1917, with option to renew for one year on same terms on 3 months notice prior to expiry of lease.
Rent. . . . . $55 a month.
Lessor. . . . . Pays all taxes (except water).
Lessee to pay lessor $17.50 quarterly for heating.

No. 10.—*Berlin, Ont.* . . . . . Part of station building, having an area of 138 square feet.
Occupied by. . . . . Sorting and stamping of letters and postal matter mailed at Berlin station, etc.
Lessor. . . . . Grand Trunk Railway Company.
Term expires. . . . . Year to year from April 1, 1914.
Rent. . . . . $50 per annum.
Lessors pay heating and lighting.

No. 11.—*Big River.* . . . . .
Occupied by. . . . . Officers of Sturgeon River and Big River, Forest Reserves, Department of Interior.
Lessor. . . . . I. C. Fish Co.
Rent. . . . . $10 per month.

No. 12.—*Black Lake, P.Q.* . . . . . Part of premises owned by lessor, 22 by 26 feet northwest side Notre Dame street.
Occupied by. . . . . Post Office.
Lessor. . . . . Alfred Larochelle.
Term expires. . . . . December 28, 1915.
Rent. . . . . $300 per annum of which Government pays $150 and Postmaster $150.
Lessor pays taxes, heat and light and removes snow from roof.

No. 13.—*Blenheim, Ont.* . . . . . Portion of townhall building.
Occupied by. . . . . Post Office.
Lessor. . . . . Town of Blenheim.
Term expires. . . . . Year to year.
Rent. . . . . $350 per annum of which Government pays $200 and Postmaster $150.
Lessors pay taxes, water, heating, lighting and cleaning.

No. 14.—*Cacouna, P.Q.* . . . . .
Occupied by. . . . . Post Office.
Lessor. . . . . Thomas Dionne.
Term expires. . . . . Year to year.
Rent. . . . . $100 per annum, of which Government pays $50 and Postmaster $50.
Lessor pays taxes, removal of snow, heat, light and cleaning.

No. 15.—*Calgary, Alta.* . . . . . 6,715 square feet in Blow building at 85 cents; also premises in basement, 660 square feet at 25 cents per square foot.
Occupied by. . . . . Commissiner of Irrigation.
Lessor. . . . . T. H. Blow—W. R. Blow & Co., Attorneys.
Term expires. . . . . March 31, 1916.
Rent. . . . . $5,872.75 per annum.
Lessor pays taxes, water and heat.

No. 16.—*Calgary, Alta.* . . . . . Room 503, Burns block, corner 8th Avenue; and Second street E., Central on Fifth Avenue—12 by 18 feet.
Occupied by. . . . . S. S. Slipper, of Geological Survey of Mines.
Lessor. . . . . P. Burns & Co., Ltd.
Term expires. . . . . Month to month.
Rent. . . . . $40 per month.
Lessor pays water, heating and lighting, and provides janitor service.

No. 17.—*Calgary, Alta.* . . . . . Rooms 51 to 54, Canada Life building and half vault.
Occupied by. . . . . Inland Revenue.
Lessor. . . . . Canada Life Assurance Co., Ltd.
Term expires. . . . . June 1, 1914, with privilege of vacating any time after 3 years on giving three months' notice in writing.
Rent. . . . . $315 per month.
Lessor pays taxes, water, heating, janitor and elevator service.
Lessee pays lighting.

*No. 18.—Calgary, Alta.*.. Rooms 41 to 44 inclusive in Canada Life building.
Occupied by.. Post Office Inspector.
Lessor.. Canada Life Assurance Co., Ltd.
Term expires.. January 1, 1919, with privilege of removing any time after 3 years on giving three months' notice in writing.
Rent.. $315 per month.
Lessor pays taxes, water, heating, janitor and elevator service.
Lessee pays lighting.

*No. 19.—Calgary, Alta.*.. Rooms 55 to 58, Canada Life building.
Occupied by.. Railway Mail.
Lessor.. Canada Life Assurance Co., Ltd.
Term expires.. January 1, 1919, with privilege of vacanting any time after 3 years on giving three months' notice in writing.
Rent.. $222 per month.
Lessor pays taxes, water, heating, janitor and elevator service.
Lessee pays lighting.

*No. 20.—Calgary, Alta.*.. Parcel of land and premises situate, lying and being in Calgary, specified on plan attached to lease.
Occupied by.. Immigration Hall site.
Lessor.. C. P. Ry.
Term expires.. March 1, 1917, but may be terminated at any time by lessor on one month's notice.
Rent.. $10 per annum.
Lessee pays all taxes.

*No. 21.—Calgary, Alta.*..
Occupied by.. Weights and Measures.
Lessor.. Miss E. Costello.
Term expires.. From month to month.
Rent.. $30 per month.
Lessor pays for heating.

*No. 22.—Calgary, Alta.*.. Premises on 6th floor, Leeson-Lineham block (Rooms 601 to 613).
Occupied by.. Lands Office.
Lessor.. J. A. Irvine & Co.
Term expires.. Month to month.
Rent.. $300 per month.
Lessors pay taxes, water, heating and elevator service.
Lessee pays lighting and janitor.

*No. 23.—Calgary, Alta.*.. Rooms 412 and 413 Leeson-Lineham block.
Occupied by.. Lands Office.
Lessor.. J. A. Irvine & Co.
Term expires.. From month to month.
Rent.. $40 per month.

*No. 24.—Calgary, Alta.*.. Lots 16 and 17 and the easterly 10 feet of lot 15 (with the exception of the site of Cottage) in block 30, section 16, in the city of Calgary.
Occupied by.. Temporary warehouse for storage purposes.
Lessor.. C. B. Munro.
Term expires.. February 22, 1916.
Rent.. $45 per month.

*No. 25.—Calgary, Alta.*.. Store on ground floor of building known as Sullivan block.
Occupied by.. Customs express.
Lessor.. Patrick O'Sullivan.
Term expires.. May 1, 1915,, with right to continue from month to month.
Rent.. $125 per month.
Lessor pays taxes, water, heating.

*No. 26.—Calgary, Alta.*.. Lots 17, 18, 19 and 20 block 52, section 15, plan "A," 100 feet on 7th avenue by 130 feet on 2nd street east.
Occupied by.. Temporary building for Post Office.
Lessors.. George B. Ryan, Helen J. Raymond, John Moody, Geo. McAllister, Walter Sharpe, Henry Knight, Malcolm D. Geedes & Herbert T. Sheffield, Geddes & Sheffield, Collecting agents.
Term expires.. October 23, 1915.
Rent.. $8,750 per annum.
Lessors pay taxes and water.

*No. 27.—Calgary, Alta.*.. One store on ground floor of Westminster block, 1st street east.
Occupied by.. Customs Mail Parcels.
Lessor.. John Sharples.
Term expires.. Month to month.
Rent.. $125 per month.
Lessor pays taxes, water, heating.
Lessee pays lighting and janitor.

*No. 28.—Calgary, Alta.*.. Rooms 1 to 6 inclusive Armstrong block, Calgary.
Occupied by.. Seeds Superintendent.
Lessor.. T. J. S. Skinner, Ltd.
Term expires.. Monthly.
Rent.. $85 per month.

*No. 29.—Calgary, Alta.*.. Rooms 310, 313 and 312 on 3rd floor of lessor's building known as the Herald Building, Calgary.
Occupied by.. Railway Commission.
Lessor.. William James Southam
Term expires.. April 1, 1916, with option to renew for 6 months or 1 year on same terms and conditions on 3 months' notice prior to April 1, 1916.
Rent.. $145 per month.
Lessor pays all taxes, water, heating, window cleaning, elevator service and janitor service.

*No. 30.—Calgary, Alta.*.. Six rooms on second floor Thomas block, Nos. 7, 8, 9, 10, 11 and 12, 2,053⅓ square feet at 85 cents per square foot.
Occupied by.. Topographical Survey.
Lessor.. R. C. Thomas.
Term expires.. April 1, 1915, and thereafter from month to month, one month's notice in writing to be given by lessors.
Rent.. $145.45 per month.
Lessor pays taxes, water, heat and provides elevator service.

*No. 31.—Calgary, Alta.*.. Office in No. 14 Cadogan block, corner 8th avenue and 2nd street.
Occupied by.. Inspector of gas and electricity.
Lessor.. R. C. Thomas.
Term expires.. Monthly.
Rent.. $50 per month.
Lessor pays heating.

*No. 32.—Calgary, Alta.*.. Rooms 28, 29, 30 and 31 in second floor of Thomas block.
Occupied by.. Forestry Department.
Lessor.. R. C. Thomas.
Term expires.. Month to month.
Rent.. $130 per month.
Lessor pays taxes, water, heating and gives free use of elevator.
Lessee pays for cleaning.

*No. 33.—Calgary, Alta.*.. Room 27 in Thomas block, Calgary.
Occupied by.. Additional accommodation for District Inspector of Forest Reserves.
Lessor.. R. C. Thomas.
Term expires.. Month to month.
Rent.. $35 per month.
Lessor pays taxes, water, heating, cleans corridors, supplies elevator service and general lavatory service.

*No. 34.—Charlottetown, P.E.I.*.. Two rooms in Royal Bank building.
Occupied by.. Publicity agent, Immigration Department.
Lessor.. Royal Bank of Canada.
Term expires.. No lease, we are tenants from year to year.
Rent.. $175 per annum.

*No. 35.—Clair, N.B.*.. Office in lessor's house.
Occupied by.. Immigration Agent.
Lessor.. Thos. J. Levesque.
Term expires.. Monthly.
Rent.. $10 per month.

*No. 36.—Cobalt, Ont.* .. .. .. .. .. .. .. .. .. Space in Royal Exchange building, 60 feet frontage with a depth of 33 feet, Prospect avenue.
Occupied by.. .. .. .. .. .. Post Office.
Lessor.. .. .. .. .. .. .. .. J. A. Jacobs.
Term expires.. .. .. .. .. .. January 30, 1918.
Rent.. .. .. .. .. .. .. .. .. $2,000 per annum.
Lessor pays taxes, water and heating.

*No. 37.—Coburg, Ont.* .. .. .. .. .. .. .. .. .. Two rooms in property of lessors, north side King street.
Occupied by.. .. .. .. .. .. Immigration Inspector.
Lessors.. .. .. .. .. .. .. .. John Gill Jackson and Lisgar Clark and O. G. Johns.
Term expires.. .. .. .. .. .. October 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $170 per annum.
Lessors pay taxes and water.

*No. 38.—Compton, Que.* .. .. .. .. .. .. .. .. Large room on west side of ground floor of the town hall.
Occupied by.. .. .. .. .. .. Post Office.
Lessor.. .. .. .. .. .. .. .. Village of Compton.
Term expires.. .. .. .. .. .. December 2, 1924.
Rent.. .. .. .. .. .. .. .. .. $150 per annum, of which Government pays $110 and Postmaster $40.
Lessor pays all taxes, water, heating and lighting.

*No. 39.—Deloraine, Man.* .. .. .. .. .. .. .. ..
Occupied by.. .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. H. H. Buxton.
Term expires.. .. .. .. .. .. April 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $300 per annum.

*No. 40.—Digby, N.S.* .. .. .. .. .. .. .. .. Privilege of laying sewer across lands on east side Water street from Dominion building.
Occupied by.. .. .. .. .. .. As above.
Lessors.. .. .. .. .. .. .. .. Geo. E. E. Nichols and M. Edith L. Lynch.
Rent.. .. .. .. .. .. .. .. .. $1 per annum.

*No. 41.—Edmundston, N.B.* .. .. .. .. .. .. Room on first floor building now occupied by the lessor on Ferry street.
Occupied by.. .. .. .. .. .. Immigration, for shelter and examining room.
Lessor.. .. .. .. .. .. .. .. Timothee E. Boudreau.
Term expires.. .. .. .. .. .. March 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $10 per annum.
Lessor provides heat, light and use of telephone.

*No. 42.—Edmonton, Alta.* .. .. .. .. .. .. .. Part of Canadian Northern Railway station grounds.
Occupied by.. .. .. .. .. .. Immigration hall.
Lessor.. .. .. .. .. .. .. .. Canadian Northern Railway.
Term expires.. .. .. .. .. .. On one month's notice from either lessor or lessees.
Rent.. .. .. .. .. .. .. .. .. $1 per annum.
Lessee pays taxes and water.

*No. 43.—Edmonton, Alta.* .. .. .. .. .. .. .. Lot 23, block 2, river lot 10, 117 Fraser ave.
Occupied by.. .. .. .. .. .. Examining warehouse.
Lessor.. .. .. .. .. .. .. .. A. W. Ormsby
Term expires.. .. .. .. .. .. May 30, 1916.
Rent.. .. .. .. .. .. .. .. .. $207 per month.
Lessor pays taxes, water, heat, light and caretaking.

*No. 44.—Edmonton, Alta.* .. .. .. .. .. .. .. Two stores on ground floor, including one vault store room, gents' lavatory and cloak room, together with additional space in basement of Alexander block.
Occupied by.. .. .. .. .. .. Lands.
Lessor.. .. .. .. .. .. .. .. George Pheasey and Charles Colbert Batson.
Term expires.. .. .. .. .. .. July 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $550 per month.
Lessors pay taxes, water and heat.
Lessee pays for light.

*No. 45.—Edmonton, Alta.* .. .. .. .. .. .. .. Office in Potter block.
Occupied by.. .. .. .. .. .. Weights and Measures.
Lessor.. .. .. .. .. .. .. .. A. E. Potter.
Term expires.. .. .. .. .. .. August 1, 1915, and afterwards from month to month.
Rent.. .. .. .. .. .. .. .. .. $420 per annum.
Lessor pays taxes, water, heat, light and cleaning.

No. 46.—*Entwistle, Alta.* .. .. .. .. .. .. .. .. Lots Nos. 20, 21 and 22 in block No. 4.
Occupied by.. .. .. .. .. .. .. .. Immigration hall.
Lessor.. .. .. .. .. .. .. .. .. .. Village of Entwistle.
Term expires.. .. .. .. .. .. .. .. March 12, 1919.
Rent.. .. .. .. .. .. .. .. .. .. .. $3 per annum.
Lessee pays all taxes and rates.

No. 47.—*Fairville, N.B.* .. .. .. .. .. .. .. .. Wire for clock service.
Lessor.. .. .. .. .. .. .. .. .. .. N. B. Telephone Company.
Rent.. .. .. .. .. .. .. .. .. .. .. $40 per annum.

No. 48.—*Fort William, Ont.*. .. .. .. .. .. .. .. Room No. 214 Cuthbertson block, north west corner May street and Victoria avenue.
Occupied by.. .. .. .. .. .. .. .. Inland Revenue, Gas and Electrical Department.
Lessor.. .. .. .. .. .. .. .. .. .. E. H. Cuthbertson.
Term expires.. .. .. .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. .. .. $18 per month.
Lessor pays taxes, water, heat and provides elevator service.
Lessee pays for light and telephone.

No. 49.—*Fort William, Ont.*. .. .. .. .. .. .. .. Suite of rooms with vault accommodation in lessors' building. Floor area about 1,200 square feet.
Occupied by.. .. .. .. .. .. .. .. District Engineer.
Lessors.. .. .. .. .. .. .. .. .. .. G. A. Graham and J. T. Horne.
Term expires.. .. .. .. .. .. .. .. August 1, 1918.
Rent.. .. .. .. .. .. .. .. .. .. .. $75 per month.
Lessors pay taxes, water and heating.

No. 50.—*Fort William, Ont.*. .. .. .. .. .. .. .. Parts of room 28, Graham-Horne building.
Occupied by.. .. .. .. .. .. .. .. Immigration.
Lessors.. .. .. .. .. .. .. .. .. .. G. A. Graham and J. T. Horne.
Term expires.. .. .. .. .. .. .. .. August 28, 1915.
Rent.. .. .. .. .. .. .. .. .. .. .. $17.40 per month.
To be moved into new examining warehouse at end of lease.

No. 51.—*Glace Bay, Cape Breton, N.S.*. .. .. .. Lot of land for construction of protection wall at Glace Bay beach.
Lessor.. .. .. .. .. .. .. .. .. .. Dominion Coal Company.
Term expires.. .. .. .. .. .. .. .. January 30, 1928, with option to renew upon request of lessee 6 months previous to expiry for a like period of 20 years.
Rent.. .. .. .. .. .. .. .. .. .. .. $1 per annum.

No. 52.—*Grande Prairie, Alta.*. .. .. .. .. .. .. Parts of building on lots 31 and 32 block 4.
Occupied by.. .. .. .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. .. .. J. O. Patterson.
Term expires.. .. .. .. .. .. .. .. January 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. .. $65 per month.

No. 53.—*Grande Prairie, Alta.*. .. .. .. .. .. .. Premises for Lands Office.
Lessors.. .. .. .. .. .. .. .. .. .. J. Fletcher and A. S. McLean.
Term expires.. .. .. .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. .. .. $20 per month.

No. 54.—*Gravelbourg, Sask.*. .. .. .. .. .. .. .. Lots 7, 8, 9, 10, block 14.
Occupied by.. .. .. .. .. .. .. .. Immigration hall.
Lessor.. .. .. .. .. .. .. .. .. .. McKenzie & Mann.
Term expires.. .. .. .. .. .. .. .. January 1, 1918. Premises to be vacated on 30 days notice by lessors at any time.
Rent.. .. .. .. .. .. .. .. .. .. .. $1 per annum.
Lessee pays taxes.

No. 55.—*Grouard, Alta.*. .. .. .. .. .. .. .. .. One long room owned by lessor.
Occupied by.. .. .. .. .. .. .. .. Immigration hall.
Lessor.. .. .. .. .. .. .. .. .. .. J. O. Giroux.
Term expires.. .. .. .. .. .. .. .. June 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. .. $40 per month.

No. 56.—*Grouard, Alta.*. .. .. .. .. .. .. .. ..
Occupied by.. .. .. .. .. .. .. .. Lands office.
Lessor.. .. .. .. .. .. .. .. .. .. Wm. Stewart, Manager Royal Bank of Canada, Peace River Crossing, Alta.
Term expires.. .. .. .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. .. .. $60 per month.
Lessee pays water, heating and lighting.

*No. 57.—Halifax, N.S.* .. Top floor Dennis building.
Occupied by .. Militia and Defence.
Lessor .. Dennis Realty Corporation.
Term expires .. October 1, 1918, with option to lessee to terminate lease at end of 3rd or 4th year from October 1, 1913, on 6 months previous notice.
Rent .. $3,112 per annum.
Lessors pay taxes, water, insurance, heating and provide elevator service.

*No. 58.—Halifax, N.S.* .. Fifth floor Dennis building corner Granville and George streets.
Occupied by .. Militia and Defence.
Lessor .. Dennis Realty Corporation.
Term expires .. October 1, 1918, with option to lessee to terminate at end of 3rd and 4th year from October 1, 1913, on 6 months previous notice.
Rent .. $3,112 per annum.
Lessors pay taxes, water, insurance, heating and provide elevator service.

*No. 59.—Halifax, N.S.* .. Office and vault in Metropole building.
Occupied by .. W. C. Milner, eastern representative of the Archives.
Lessor .. Eastern Canada Savings and Loan Company, Metropole building, Halifax, N.S.
Term expires .. Monthly.
Rent .. $18.75 per month.

*No. 60.—Halifax, N.S.* .. 245, 247 and 249 Hollis street.
Occupied by .. Customs Express and warehouse.
Lessor .. Estate of Dr. James Walker represented by R. S. Rossborough, trustee, Halifax, N.S.
Term expires .. April 30, 1917.
Rent .. $1,200 per annum.
Lessor pays taxes.
Lessee pays water.

*No. 61.—Hamilton, Ont.* .. Ground floor of building on south-east corner of Kinrade avenue and Barton street, also cellar accommodation and rear entrance.
Occupied by .. Post Office station "B."
Lessor .. Clara Jane Swales.
Term expires .. November 1, 1916.
Rent .. $1,200 per annum.
Lessor pays taxes, water, heat and repairs to heating apparatus, also cleaning.

*No. 62—Hampton, N.B.* .. Right and privilege to connect with I. C. Ry. water pipe at Hampton and draw water therefrom for purposes of post office at Hampton.
Lessor .. I. C. Ry.
Term expires .. During pleasure of lessor.
Rent .. $25 per annum.
Lessee pays all taxes.

*No. 63.—Indian Head, Sask.* .. Four rooms in two-story brick building, Main street.
Occupied by .. Tree distributing staff.
Lessor .. Mrs. L. A. Osment.
Term expires .. Yearly tenants from September 1 each year.
Rent .. $300 per annum.
Lessor pays taxes, water
Lessee pays heat, light and cleaning.

*No. 64.—Joliette, P.Q.* .. Safe in temporary post office quarters.
Lessor .. Canadian Bank of Commerce.
Rent .. $5 per month.

*No. 65.—Joliette, P.Q.* .. Chaput brick building, ground floor, 1st floor and attic.
Occupied by .. Customs and caretaker.
Lessor .. J. Ulric and J. Antonia Chaput.
Term expires .. May 1, 1916.
Rent .. $600 per annum.
Lessor pays taxes.
Lessee pays water, heat and light.

*No. 66.—Joliette, P.Q.* . . . . . Part of house, 33a Manseau street.
Occupied by . . . . . Assistant Post Office Inspector.
Lessor . . . . . Mrs. Marie Amanda Dauphin.
Term expires . . . . . Month to month till public building is ready for occupation.
Rent . . . . . $264 per annum.
Lessor pays taxes, water, heat, light, cleaning and removal of snow.

*No. 67.—Joliette, P.Q.* . . . . . Ground floor Lachapelle building, previously occupied by Canadian Bank of Commerce.
Occupied by . . . . . Post office temporarily.
Lessor . . . . . Euclide Lachapelle.
Term expires . . . . . May 1, 1916.
Rent . . . . . $720 per annum.
Lessor pays taxes.
Lessee pays water, heat and light.

*No. 68.—Joliette, P.Q.* . . . . . Additional space in lessor's building 20 by 20 feet.
Occupied by . . . . . Post office (temporarily).
Lessor . . . . . Euclide Lachapelle.
Term expires . . . . . May 1, 1916.
Rent . . . . . $20 per month.

*No. 69.—Joliette, P.Q.* . . . . . Part of first flat of house east corner of St. Viateur and Place Bourget.
Occupied by . . . . . Weights and Measures.
Lessor (executor of) . . . . Mrs. Joseph Louis Preville, widow.
Term expires . . . . . January 22, 1918.
Rent . . . . . $264 per annum.
Lessor pays taxes, removes snow and pays heat, light and cleaning.

*No. 70.—Joliette, P.Q.* . . . . . Ground floor brick building, 26 St. Viateur street.
Occupied by . . . . . Inland Revenue.
Lessor . . . . . Joseph C. L. Rivest.
Term expires . . . . . May 1, 1916, with option to renew for one year or half of one year at $25 a month on three months' notice to lessor prior to expiry of lease.
Rent . . . . . $25 per month, but as premises removed to second floor rent has been reduced by $1 per month.
Lessor pays taxes and heating.
Lessee pays water.

*No. 71.—Kamloops, B.C.* . . . . . Rooms 19, 20, 21 and 22 in Acadia building.
Occupied by . . . . . Divisional Hydrographic Engineer.
Lessor . . . . . Independent Securities, Ltd.
Term expires . . . . . Month to month.
Rent . . . . . $71 per month.

*No. 72.—Kamloops, B.C.* . . . . . Part of ground floor 60 by 20 feet and two vaults 15 feet 6 inches by 8 feet and 6 feet 8 inches in lessor's building, north-east corner Fourth avenue and Seymour street, Western Canada Trust building.
Occupied by . . . . . Dominion Lands and Crown Timber Service.
Lessor . . . . . Independent Securities, Ltd.
Term expires . . . . . September 1, 1917.
Rent . . . . . $125 per month.
Lessors pay taxes, water, heat and cleaning.

*No. 73.—Kamloops, B.C.* . . . . . Four rooms Nos. 11, 12, 13 and 14 fronting on Seymour street, on first floor of building north-east corner of Fourth avenue and Seymour street, building known by following names: Western Canada Trust building, Acadia building and Kamloops Syndicate building.
Occupied by . . . . . Forestry branch.
Lessor . . . . . Kamloops Building Syndicate.
Term expires . . . . . July 15, 1915.
Rent . . . . . $112 per month.
Lessors pay taxes, water, heat, light and janitor.
New arrangement pending.

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*No. 75.—Kingston, Ont.* . . . . . Four rooms in second flat, facing on King street, Nos. 1, 2, 3 and 4 (vault accommodation included) in the Bank of Toronto building, and part of lot 96 in city of Kingston.
Occupied by . . . . . E. H. Pense and staff in connection with harbour improvements.
Lessor . . . . . Bank of Toronto.
Term expires . . . . . May 1, 1916.
Rent . . . . . $360 per annum. Rental paid charged monthly to harbour improvements.
Lessors pay water, heat and cleaning of halls.

*No. 76.—Kingston, Ont.* . . . . . Premises on Market square, ground floor of tenement No. 8, the ground floor and second floor of tenement No. 10, and the whole of tenements Nos. 12 and 14 street number, forming part of lot letter I in Ontario ward, Kingston.
Occupied by . . . . . Federal Public Service, Inland Revenue, Customs, Marine and Fisheries, and Railways and Canals.
Lessors . . . . . Representatives of Gildersleeve estate, Kingston, represented by Henry Herchmer Gildersleeve and Helen Emily Herchmer, of Belleville, committee of the person and estate of Laurence Kirby Herchmer, a person of unsound mind.
Term expires . . . . . July 1, 1928, with option to renew for 21 years on same conditions.
Rent . . . . . $1,762 per annum.
Lessee provides fireman, light and fuel and water and pays taxes, street sprinkling and snow cleaning.

*No. 77.—Kingston, Ont.* . . . . . Front room, ground floor, of house 3, Johnston street.
Occupied by . . . . . Immigration agent.
Lessor . . . . . Mrs. Catherine Mathewson.
Term expires . . . . . May 31, 1916.
Rent . . . . . $180 per annum.
Lessee to keep up fences.

*No. 78.—Kingston, Ont.* . . . . . Premises situate on part of lots 294 and 295, west Bagot street, frontage 134 feet, depth 119 feet, south side of Brock and Clarence streets, with brick building, stables and sheds.
Occupied by . . . . . Additional stores for Militia Department.
Lessor . . . . . Thos. J. Polly, present address 625 11th avenue west, Calgary.
Term expires . . . . . May 1, 1919.
Rent . . . . . $1,000 per annum.
Lessor pays ground rent, taxes and water.

*No. 79.—Lacolle, P.Q.* . . . . . Office S.E. corner of Church and St. Bernard streets.
Occupied by . . . . . Immigration Inspector.
Lessor . . . . . Dame Gubladine Tremblay.
Term expires . . . . . April 30, 1916.
Rent . . . . . $96 per annum.

*No. 80.—Landsdowne, Ont.* . . . . . Ground floor of tenement of building owned by lessor, north-east corner of Prince street and Grand Trunk avenue.
Occupied by . . . . . Post Office.
Lessor . . . . . Wm. McConnell.
Term expires . . . . . December 1, 1918.
Rent . . . . . $150 per annum of which Government pays $50 and Postmaster $100.
Lessor pays taxes.

*No. 81.—Le Pas, Manitoba* . . . . . Store on east side of Edwards avenue adjoining corner of Edward avenue and Second street.
Occupied by . . . . . Post Office.
Lessor . . . . . Wm. Sinclair, M.D.
Term expires . . . . . September 15, 1915.
Rent . . . . . $600 per annum.
Lessor pays all taxes.

*No.* 74.—*Kerrobert, Sask.* .. .. .. .. .. .. .. .. Site Immigration hall.
Lessor.. .. .. .. .. .. .. .. C. P. Railway.
Term expires.. .. .. .. .. .. May 1, 1912, and afterwards from year to year, lease may be terminated by lessor by one month's notice, and such notice may be given by posting same on the premises.
Rent.. .. .. .. .. .. .. .. .. $1 per year.
Lessee pays taxes.

*No.* 82.—*London, Ont.*.. .. .. .. .. .. .. .. .. Room No. 3, Coote block.
Occupied by.. .. .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. .. John C. Coote.
Term expires.. .. .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. .. $10 per month.

*No.* 83.—*Longue Point, P.Q.*.. .. .. .. .. .. .. A portion of ground adjoining lessors shops at National Bridge Co., Longue Point.
Occupied by.. .. .. .. .. .. .. Storage of materials in connection with the construction of new examining warehouse, Montreal.
Lessor.. .. .. .. .. .. .. .. .. P. Lyall & Sons Construction Co., Ltd.
Term expires.. .. .. .. .. .. .. "During such time as premises are required by the lessee for said purpose" of storage.
Rent.. .. .. .. .. .. .. .. .. .. $1 for period "of which receipt is hereby acknowledged."

*No.* 84.—*L'Orignal, Ont.*. .. .. .. .. .. .. .. .. West half of two-story brick building north side King street on lot letter "D" in village of L'Orignal and a strip of land 21 feet in width by 30 feet in depth at the rear of building.
Occupied by.. .. .. .. .. .. .. Post Office.
Lessor.. .. .. .. .. .. .. .. .. Alexandre Chatelaine.
Term expires.. .. .. .. .. .. .. January 1, 1919.
Rent.. .. .. .. .. .. .. .. .. .. $250 per annum, half of which is paid by Government and half by Postmaster.
Lessor pays taxes, Postmaster pays for water, heat, light and cleaning.

*No.* 85.—*Maisonneuve, P.Q.*.. .. .. .. .. .. .. Portion of lessor's building.
Occupied by.. .. .. .. .. .. .. P.O. Station M.
Lessor.. .. .. .. .. .. .. .. .. Mrs. Sophia deCoste, widow of E. deBellefeuille.
Term expires.. .. .. .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. $25 per month.
Lessor pays all taxes except water rates.

*No.* 86.—*Maple Creek, Sask.*.. .. .. .. .. .. .. First floor of lessor's building corner facing the railway depot.
Occupied by.. .. .. .. .. .. .. Lands.
Lessor.. .. .. .. .. .. .. .. .. L. C. Parsons, Cowansville, P.Q.
Term expires.. .. .. .. .. .. .. March 1, 1918.
Rent.. .. .. .. .. .. .. .. .. .. $1,200 per annum.
Lessor pays all taxes and provides water service and drainage.

*No.* 87.—*Maple Creek, Sask.*.. .. .. .. .. .. .. Room in building adjoining Lands office.
Occupied by.. .. .. .. .. .. .. Ranch Inspector.
Lessor.. .. .. .. .. .. .. .. .. D. J. Wylie.
Term expires.. .. .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. .. $15 per month.

*No.* 88.—*Medicine Hat, Alta.*.. .. .. .. .. .. .. Portion of building occupied by lessor on lots 11 and 12 in block 6 more particularly described as office on north east corner of the building.
Occupied by.. .. .. .. .. .. .. Meter Testing Office.
Lessor.. .. .. .. .. .. .. .. .. Times Pub. Co.
Term expires.. .. .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. .. $30 per month.
Lessor pays all tax s including water, also electric light and gas.

*No.* 89.—*Medicine Hat, Alta.* .. .. .. .. .. .. .. 407 Main street, ground floor, 1,125 square feet.
Occupied by.. .. .. .. .. .. .. Examining warehouse.
Lessor.. .. .. .. .. .. .. .. .. H. T. W. Forster.
Term expires.. .. .. .. .. .. .. December 6, 1915.
Rent.. .. .. .. .. .. .. .. .. .. $75 per month.
Lessor pays all taxes including water, also insurance.

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*No. 90—Medicine Hat, Alta* . . . . . Office 306, owned by lessors in office building on lots 23 and 24, block 14, plan 1491.
Occupied by . . . . . Immigration.
Lessor . . . . . Walter Huckvale and Sidney Tom Hooper.
Term expires . . . . . June 1, 1916.
Rent . . . . . $28 per month.
Lessor pays janitor.

*No. 91.—Merrickville, Ont.* . . . . . Portion of Jakes block erected in part on lot 5 on Main street.
Occupied by . . . . . Post office.
Lessor . . . . . Geo. L. Jakes.
Term expires . . . . . January 1, 1916, with option to renew for one year on same terms and conditions.
Rent . . . . . $350 per annum of which Government pays $200 and Postmaster $150.
Lessor pays all taxes, including water, also heat, light and cleaning.

*No. 92.—Montmagny, P.Q.* . . . . . Lessors' building, near I.C.R. station.
Occupied by . . . . . Storage for machinery, tools, etc., owned by Department of Public Works.
Lessor . . . . . A. Belanger.
Term expires . . . . . November 1, 1916.
Rent . . . . . $50 per annum.
Lessor pays all taxes.

*No. 93.—Montreal, Que.* . . . . . Ground floor and first floor of Read building on St. Alexander street, floor area 38,503 sup. feet, 65 cents per square foot.
Occupied by . . . . . Customs Express.
Lessor . . . . . Alexander Building, Ltd.
Term expires . . . . . May 1, 1916, with option of renewal for one year on same terms and conditions on three months' notice to lessors before expiry of lease.
Rent . . . . . $25,000 per annum.
Lessor pays all taxes and heating and provides elevator service.
Lessee pays for water.

*No. 94.—Montreal, Que.* . . . . . Room No. 20 on first floor of Beardmore bldg.
Occupied by . . . . . Supervising Engineer, Public Works Dept.
Lessor . . . . . Beardmore & Company.
Term expires . . . . . May 1, 1916.
Rent . . . . . $800 per annum.
Lessor pays taxes and heating and provides elevator service.
Lessee pays water.

*No. 95.—Montreal, Que.* . . . . . Northwest part of a store No. 101 St. Catherine street east.
Occupied by . . . . . Postal station "N."
Lessor . . . . . Cordelia Blache curatrix to Alfred Dalbeck, advocate, her husband represented herein by Charles Real Blache, of Montreal, agent.
Term expires . . . . . May 1, 1916.
Rent . . . . . $1,800 per annum.
Lessor pays all taxes.
Lessee pays water, snow cleaning and in addition to heating the portion of the building occupied by Postal Station "N," also heats fruit store occupied by L. Payne and Hall for physical culture.

*No. 96.—Montreal, Que.* . . . . . Office southwest corner of baggage room of Windsor street station.
Occupied by . . . . . Mail room.
Lessor . . . . . Canadian Pacific Railway.
Term expires . . . . . November 1, 1908, or lease may be terminated by lessor at any time by mailing (postage paid) at post office in Montreal, a notice addressed to the Minister of Public Works, Ottawa, naming a day at least three months from the mailing thereof.
Rent . . . . . $213 per annum.
Lessor pays for heating.

*No. 97.—Montreal, Que.* . . . . . Portions on the fifth and ninth floors of Shaughnessey building corner of McGill and St. Paul streets.
Occupied by . . . . . District Engineer Public Works Department and Wreck Commissioners of Department of Marine and Fisheries.
Lessors . . . . . Dorchester Realties, Ltd.
Term expires . . . . . May 1, 1919.
Rent . . . . . $7,327.37 per annum equals $1 a square foot and 10 per cent on cost of partitions.
Lessors pay taxes, insurance, heating and provide elevator service.
Lessee pays for water.

*No. 98.—Montreal, Que.* . . . . . Brick and stone building on St. Paul street, Nos. 272 and 274, extending through to Nos. 113 and 115 on Commissioners street.
Occupied by . . . . . Military stores and offices.
Lessor . . . . . Estate of Simeon Delorme.
Term expires . . . . . May 1, 1917.
Rent . . . . . $3,000 per annum.
Lessee pays general taxes.

*No. 99.—Montreal, Que.* . . . . . About one-half of the eighth floor of Shaughnessey building, corner McGill and St. Paul streets.
Occupied by . . . . . Marine and Fisheries.
Lessor . . . . . Dorchester Realties, Limited.
Term expires . . . . . May 1, 1919.
Rent . . . . . $4,420.05 per annum equals $1 per square foot and 10 per cent on cost of partitions.
Lessors pay taxes, insurance, heating and provide elevator service and attendants thereof.
Lessee pays for water.

*No. 100.—Montreal, Que.* . . . . . First floor of a property bearing No. 19, on official plan and book of reference of Centre ward (209 Commissioners street).
Occupied by . . . . . Marine and Fisheries.
Lessor . . . . . Julie Gougeon, wife of Theophile Prud'homme.
Term expires . . . . . May 1, 1916.
Rent . . . . . $1,250 per annum.
Lessor pays all taxes, including water rates, also heating.
Lessee pays lighting and cleaning.

*No. 101.—Montreal, Que.* . . . . . Premises in ground floor and basement west half of basement of property bearing No. 19, on official plan and book of reference of Centre ward, and room 412 on first floor, 207 Commissioner street.
Occupied by . . . . . Carpenter shop.
Lessor . . . . . Julie Gougeon, wife of Theophile Prud'homme.
Term expires . . . . . May 1, 1916.
Rent . . . . . $55 per month.
Lessors pay all taxes, including water rates, also heating, lighting and cleaning.

*No. 102.—Montreal, Que.* . . . . . Rooms 4, 5, 6, 7, Duluth building and space in vault.
Occupied by . . . . . Archives.
Lessor . . . . . Gravelle estate.
Term expires . . . . . May 1, 1916, with option renew for another year.
Rent . . . . . $90 per month.
Lessor pays heating and cleaning and provides elevator service.

*No. 103.—Montreal, Que.* . . . . . St. Cunegonde Ward, ground flour, Municipal building, corner Vinet and Richelieu, Montreal, with vault and toilet room, and basement, with entrance on Vinet street.
Occupied by . . . . . Post Office.
Lessor . . . . . Originally City of St. Cunegonde, now City of Montreal.
Term expires . . . . . June 10, 1925.
Rent . . . . . $1,750 per annum.
Lessor pays heat, light and cleaning.

*No. 104.—Moosejaw, Sask.* . . . . . Lots 27 and 28 in block 127 on Manitoba street.
Occupied by . . . . . Immigration.
Lessor . . . . . City Clerk of Moosejaw.
Term expires . . . . . April 15, 1916.
Rent . . . . . $100 per annum.

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*No. 105.—Nelson, B.C.*.. Four rooms in lessor's brick building, corner Ward and Victoria streets.
Occupied by.. District Engineer.
Lessor.. John Ed. Annable.
Term expires.. April 12, 1916, with option to renew for one year on same terms, or 3 months' notice to lessor, prior to expiry of lease.
Rent.. $600 per annum.
Lessor pays taxes, water, heating, lighting and janitor.

*No. 106.—Nominigue, P.Q.*.. Privilege of gate, 15 feet in width in fence at C. P. Ry. station grounds.
Lessor.. C. P. Ry.
Term expires.. Gate may be removed and opening closed any time by C. P. Ry. on one month's written notice or by posting notice on premises.
Rent.. $8 for first year and $1 per year after that
Lessee indemnifies lessor against any damages.

*No. 107.—North Battleford site.*
Occupied by.. Immigration Hall.
Lessor.. Canadian Northern Railway.
Term expires.. April 30, 1909, lessee or lessor may terminate lease on one month's notice in writing.
Rent.. $1 per annum.
Lessee pays taxes.

*No. 108.—North Battleford*.. Two large connected rooms, also wash room and toilet room, cellar and ground in rear to lane. No. 18 Railway avenue east.
Occupied by.. Immigration and Lands Office.
Lessor.. Wm. Dickinson.
Term expires.. May 5, 1916.
Rent.. $50 per month.

*No. 109.—North Portal, Sask.*.. Site.
Occupied by.. Immigration Hall.
Lessor.. C. P. Ry.
Term expires.. Year to year (1st June each year).
Rent.. $1 per annum.
Lessee pays taxes.

*No. 110.—North Sydney*.. Second story flat of Y. M. C. A. building
Occupied by.. Engineers Public Works Department.
Lessor.. Y. M. C. A.
Term expires.. May 1, 1916.
Rent.. $600 per annum.
Lessor pays taxes and heating.
Lessee pays water and lighting.

*No. 111.—Old Alberni, B.C.*.. Part of building on lot 1, block 11, in town of Old Alberni, B.C., 26 by 26 feet.
Occupied by.. Post Office.
Lessor.. Leonard Frank.
Term expires.. April 1, 1916.
Rent.. $200 per annum.
Lessor pays all taxes including water rates.

*No. 112.—Ottawa, Ont.*.. Two rooms, one in front and one in rear with vaults and lavatories, Victoria Chambers, 130 Wellington street, floor area 950 square feet.
Occupied by.. Interior Department, Inspector Dominion Lands Surveys.
Lessor... William Anderson Allan and Sandford Hall Fleming.
Term expires.. April 20, 1913.
Rent... $90 per month.
Lessor pays all taxes, heating and lighting.

*No. 113.—Ottawa, Ont.*.. Suite No. 5 in Aylmer Annex, Nos. 11, 19 Slater street and storeroom in basement, 1,598 square feet at 40·7 cents.
Occupied by.. Col. Biggar and staff, Militia and Defence Dept.
Lessor... Sir Henry N. Bate Realty Corporation.
Term expires... December 1, 1916.
Rent.. $720 per annum.
Lessors pay all taxes and heating, also janitor, but not care of premises leased.

*No. 114.—Ottawa, Ont.* . . . . . Aylmer Annex, apartment No. 6.
Occupied by. . . . . Militia and Defence.
Lessor. . . . . Sir Henry Bate Realty Corporation.
Term expires. . . . . October 1, 1916.
Rent. . . . . $648 per annum.
Lessor pays all taxes, heating, water and janitor, but not care of premises leased.

*No. 115.—Ottawa, Ont.* . . . . . Suite of rooms in Apartment No. 7, in Aylmer Annex, and storeroom in basement, floor area 1,118 square feet.
Occupied by. . . . . Royal Engineers.
Lessors. . . . . Sir Henry N. Bate Realty Corporation.
Term expires. . . . . October 1, 1916.
Rent. . . . . $30 per month in advance.
Lessor pays all taxes, heating and janitor, but not caretaking of premises leased.

*No. 116.—Ottawa, Ont.* . . . . . 10-12 Albert street, with right of way on east of premises, floor area 8,700 square feet.
Occupied by. . . . . Examining warehouse and Express office.
Lessors. . . . . H. N. Bate & Sons, Ltd.
Term expires. . . . . May 1, 1916.
Rent. . . . . $1,600 per annum.
Lessors pay taxes.
Lessee pays water and street sprinkling.

*No. 117.—Ottawa, Ont.* . . . . . Clock line service.
Lessor. . . . . Bell Telephone Co.
Term expires. . . . . April 19, 1915, may be terminated by either party on 30 days' written notice in advance. Lines remain the property of the company.
Rent. . . . . $395 per annum.

*No. 118.—Ottawa, Ont.* . . . . . Whole of five upper floors and part of basement in Birks building, Sparks street, floor area 23,185 square feet.
Occupied by. . . . . Militia and Defence, Inland Revenue, Railways and Canals, Public Works Department and Agriculture.
Lessors. . . . . Henry Birks & Sons, Ltd.
Term expires. . . . . October 1, 1916.
Rent. . . . . $17,000 per annum.
Lessors pay taxes, heating and provide elevator.
Lessee pays water, lighting and cleaning.

*No. 119.—Ottawa, Ont.* . . . . . Two rooms on first floor of lessors' building, corner of Sparks and Bank streets. Floor area, 469 square feet.
Occupied by. . . . . Mr. Challoner, Geodetic Survey, P. W. Dept.
Lessor. . . . . Russell Blackburn.
Term expires. . . . . May 1, 1916.
Rent. . . . . $350 per annum.
Lessors pay taxes and heating
Lessee pays water.

*No. 120.—Ottawa, Ont.* . . . . . Part of 2nd floor, part of 3rd floor and the whole of 4th, 5th, 6th, 7th, 8th and 9th floors of eastern portion of Union Bank building, 29,350 square feet, which excludes halls, staircase, elevator space, corridors and toilet rooms, counting the top floor at one and one-half floors on account of its extra height.
Occupied by. . . . . Post Office and Interior.
Lessors. . . . . R. L. and R. Blackburn.
Term expires. . . . . July 16, 1918.
Rent. . . . . $28,986 per annum.
Lessors pay taxes, heating and provide elevator service.
Lessee pays water, lighting and cleaning.

*No. 121.—Ottawa, Ont.* . . . . . Large front room in basement of Union Bank building, on eastern side of building, floor area 2,600 sup. feet.
Occupied by. . . . . Railway Lands Branch Interior Department.
Lessors. . . . . R. L. & R Blackburn.
Term expires. . . . . August 21, 1917, with option to renew.
Rent. . . . . $1,040 per annum.
Lessor pays taxes, heating and elevator service
Lessee pays lighting and water.

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*No. 122.—Ottawa, Ont.* . . . . . Room 414 in Union Bank building.
Occupied by. . . . . Mr. Scovil, Water Power Branch Interior.
Lessors. . . . . R. L. & R. Blackburn.
Term expires. . . . . November 9, 1915.
Rent. . . . . $371 per annum.
Lessor pays all taxes (except water), heating, and provides elevator service.

*No. 123.—Ottawa, Ont.* . . . . . Six floors in Union Bank building at rear of Langevin block, floor area 15,240 square feet.
Occupied by. . . . . Interior and Post Office.
Lessors. . . . . R. L. & R. Blackburn.
Term expires. . . . . January 6, 1917.
Rent. . . . . $13,000 per annum.
Lessor pays taxes and heating.
Lessee pays water.

*No. 124.—Ottawa, Ont.* . . . . . Two rooms bearing Nos. 608, 609 and 611, Union Bank building, 1,154 superficial feet.
Occupied by. . . . . Post Office Department.
Lessors. . . . . R. L. & R. Blackburn.
Term expires. . . . . July 15, 1918.
Rent. . . . . $1,154 per annum.
Lessors pay all taxes, less water rates.

*No. 125.—Ottawa, Ont.* . . . . . Room 408 with adjoining L in section "C" Union Bank building, 431 square feet floor space.
Occupied by. . . . . Water Power Bch. Supt., Interior.
Lessors. . . . . R. L. & R. Blackburn.
Term expires. . . . . July 16, 1918.
Rent. . . . . $431 per annum.
Lessors pay all taxes (except water rates), heating, lighting, cleaning and provide elevator service.

*No. 126.—Ottawa, Ont.* . . . . . Three top floors of the Plaza building, corner Sussex and Rideau streets.
Occupied by. . . . . Statistical Branch of Customs.
Lessors. . . . . R. L. & R. Blackburn.
Term expires. . . . . One year from date of occupation. Order in Council passed August 20, 1915=50 cents per square foot.
Rent. . . . . $6,085 per annum.
Lessors pays taxes, heating and elevator service.

*No. 127.—Ottawa, Ont.* . . . . . Three upper floors of building on Sparks street known as Booth building, 16,495 square feet.
Occupied by. . . . . Indian Affairs.
Lessors. . . . . C Jackson Booth and J. A. D. Holbrook.
Term expires. . . . . November 1, 1918.
Rent. . . . . $16,495 per annum.
Lessors pay all taxes and heating and provide use of elevators.

*No. 128.—Ottawa, Ont.* . . . . . 4th floor Booth building, 2,500 square feet at $1 per foot.
Occupied by. . . . . War Purchasing Commission.
Lessors. . . . . C. Jackson Booth and J. A. D. Holbrook.
Term expires. . . . . November 1, 1918.
Rent. . . . . $2,500 per annum.
Lessors pay all taxes and heating and provide use of elevators.

*No. 129.—Ottawa, Ont.* . . . . . Room No. 212 Trafalgar building, floor area 291 square feet.
Occupied by. . . . . Civil Service Commission.
Lessor. . . . . John Charles Brennan.
Term expires. . . . . Year to year from September 1.
Rent. . . . . $274.62 per annum.

*No. 130.—Ottawa, Ont.* . . . . . Premises in Trafalgar building: —
On 1st floor.—Rooms Nos. 101 to 106 inclusive and Nos. 112 and 113, rooms 107 to 111 inclusive, occupied by Annuities Branch, Post Office Department.
On 2nd floor.—Rooms Nos. 201, 202, 203, 206 to 214 inclusive, occupied by Civil Service Commission.

*No. 130.—Ottawa, Ont.*—Con.

On 3rd floor.—Rooms 301 to 314 inclusive, occupied by Accountant's Branch Interior Department.
On 4th floor.—Rooms 401 to 409 inclusive, 412 also 413, (room 413 vacant), occupied by Controller of Revenue, Interior Department. Floor area 16,955 square feet.
Lessor.. .. .. .. .. .. .. .. John Charles Brennan.
Term expires.. .. .. .. .. .. May 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $16,000 per annum.
Lessor pays taxes and heating and provides use of elevator.
Lessee pays water and lighting and cleaning.

*No. 131.—Ottawa, Ont*.. .. .. .. .. .. .. .. Four floors above ground floor in lessors building on Queen street between Bank and O'Connor streets, 12,280 superficial feet.
Occupied by.. .. .. .. .. .. Interior Department, Dominion Parks Branch, 1st and 2nd floors; Public Works Department, Upper Ottawa storage, 3rd floor; Public Works Department, Georgian Bay Commission, 1st floor (part); Public Works Department, District Engineer, 4th floors.
Lessor.. .. .. .. .. .. .. .. Bryson Realty Co., Ltd.
Term expires.. .. .. .. .. .. April 25, 1919.
Rent.. .. .. .. .. .. .. .. .. $8,596 per annum.
Lessors pay taxes, water rates, heating.
Lessee provides elevator attendant.

*No. 132.—Ottawa, Ont*.. .. .. .. .. .. .. .. 100 feet storage space in Bryson Realty Co.'s building on Queen street between Bank and O'Connor streets.
Occupied by.. .. .. .. .. .. Storage.
Lessors.. .. .. .. .. .. .. .. Bryson Realty Co., Ltd.
Rent.. .. .. .. .. .. .. .. .. $30 per year.
Term expires.. .. .. .. .. .. Year to year, May 20.

*No. 133.—Ottawa, Ont*.. .. .. .. .. .. .. .. No. 105 Murray street, floor area 5,975 square feet. Lessors to provide the necessary access to 1st floor from the main building.
Occupied by.. .. .. .. .. .. Storage for Printing Bureau.
Lessors.. .. .. .. .. .. .. .. The Bytown and Suburb Lands Co., Ltd.
Term expires.. .. .. .. .. .. July 14, 1919.
Rent.. .. .. .. .. .. .. .. .. $2,390 per annum.
Lessors pay taxes, water and insurance.

*No. 134.—Ottawa, Ont*.. .. .. .. .. .. .. .. Basement 136 Emmett street, 3,300 square feet.
Occupied by.. .. .. .. .. .. Storage Militia and Defence.
Lessor.. .. .. .. .. .. .. .. Capital Storage Co., Ltd.
Term expires.. .. .. .. .. .. Date of lease, October 8, 1914. Term 1 year from date of occupation and thereafter during the continuance of the war. Lessee to give 3 months written notice of intention to vacate.
Rent.. .. .. .. .. .. .. .. .. $1,650 per annum.
Lessor pays taxes, water, insurance, heating and elevator service.

*No. 135.—Ottawa, Ont*.. .. .. .. .. .. .. .. Third or top floor of building on Driveway corner of Emmet and Lewis streets.
Occupied by.. .. .. .. .. .. General Medical Service, Militia and Defence Department.
Lessors.. .. .. .. .. .. .. .. Capital Storage Co., Ltd.
Term expires.. .. .. .. .. .. April 17, 1917.
Rent.. .. .. .. .. .. .. .. .. $1,520 per annum.
Lessors pay all taxes, water, heating and provide elevator for freight.

*No. 136.—Ottawa, Ont*.. .. .. .. .. .. .. .. 2nd, 3rd, 4th, 5th, 6th and 7th floors of Carling building east side Bank street between Sparks and Queen street.
Occupied by .. .. .. .. .. Interior Department.
Lessor.. .. .. .. .. .. .. .. Mrs. Eva C. Carling.
Term expires.. .. .. .. .. .. February 22, 1920.
Rent.. .. .. .. .. .. .. .. .. $13,000 per annum.
Lessor pays all taxes, heating and provides elevator service.

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*No. 137.—Ottawa, Ont.*.. Dwelling house and premises, No. 12 Emmett street, excepting the stable facing Lisgar street, which lessor may remove at any time, floor area 3,000 square feet.
Occupied by.. Medical Laboratory of Hygiene.
Lessor.. E. W. Clark, Managing Director Standard Milk Co., corner Yukon and 8th avenue, Vancouver, B.C.
Term expires.. April 30, 1918.
Rent.. $50 per month.
Lessor pays taxes.
Lessee pays water, water sprinkling, snow cleaning.

*No. 138.—Ottawa, Ont.*.. First and second floors of building 113-115 Rideau street, (corner William) with a small shed in rear. Floor area 10,919 square feet.
Occupied by.. Militia Department.
Lessors.. Duford and Charleson.
Term expires.. February 20, 1916.
Rent.. $4,700 per annum and $2,353.60 per annum at 111 Rideau street. Rental February 15, 1912, for additional space required.
Lessors pay taxes and heating.
Lessees pay water.

*No. 139.—Ottawa, Ont.*.. Property in Ottawa, 128 Wellington street. Floor area 5,714 square feet.
Occupied by.. N. W. Mounted Police.
Lessor.. D. M. Finnie and W. D. Morris.
Term expires.. November 20, 1915, with option of renewal for 3 years on same terms and conditions.
Rent.. $4,000 per annum.
Lessors pay taxes, water, insurance.
Lessee pays heating, cleaning and lighting.

*No. 140.—Ottawa, Ont.*.. Brick building north side of Sparks street at No. 347, consisting of basement and 3 stores. Floor area 5,376 square feet.
Occupied by.. Militia stores.
Lessor.. Thomas Fleming.
Term expires.. April 1, 1916.
Rent.. $1,080 per annum.
Lessor pays taxes.
Lessee pays water.

*No. 141.—Ottawa, Ont.*.. Two top floors of Imperial building, corner Queen and O'Connor streets. Floor area 10,497 square feet.
Occupied by.. Topographical Branch of Interior Department.
Lessor.. John M. Garland.
Term expires.. October 1, 1916.
Rent.. $2,500 per annum.
Lessors pay taxes, water, insurance, heating.
Lessee pays lighting and cleaning.

*No. 142.—Ottawa, Ont.*.. All that 4-story brick building northeast corner of O'Connor and Queen streets, known as Regal building. Floor area, 22,512 square feet.
Occupied by.. Labour Department, Militia Department, Aberdeen Association.
Lessor.. J. E. Hanna.
Term expires.. September 12, 1919.
Rent.. $13,000 per annum.
Lessor pays taxes.
Lessee pays water, snow cleaning, heating, lighting, street sprinkling, janitor service, operation of elevator and all expenses in connection with maintenance. Order in Council, September 11, 1914.

*No. 143.—Ottawa, Ont.*.. Third floor of Hope building, corner Sparks and Elgin streets. Floor area, 2,544 square feet.
Occupied by.. Railway Mail Service.
Lessor.. James Hope & Son.
Term expires.. January 29, 1916, with option to renew for two years on same terms.
Rent.. $2,500 per annum.
Lessors pay taxes, water, insurance, heat and provide elevator service

*No. 144.—Ottawa, Ont.* . . . . . Basement Langevin block.
Lessor . . . . . Jas. Hope.
Term expires. . . . . April 25, 1919, renewable at expiry of lease for 21 years and thereafter for further 21 years at expiry of each 21 years period.
Rent. . . . . $5 per annum.

*No. 145.—Ottawa, Ont.* . . . . . *Canadian building.*—12 and 14 Slater street, excepting that portion occupied by lessor as an office.
*Militia buildinig.*—22 and 28 Slater street.
*Queen street building.*—64 and 66 Queen street.
Occupied as follows. . . . . *Canadian building present occupants:*
7th floor.—Agriculture.
6th " —Census and Statistics.
5th " —west side.—Agriculture.
5th " —east side.—Auditor General.
4th " —Interior.
3rd " —Interior.
2nd " —Immigration.
1st " —Immigration (west side).
1st " —Interior (east side).
*Militia building.*—All floors occupied by Militia and Defence, excepting two storerooms in basement occupied by Customs Statistics.
*Queen street building.*—By Agriculture. Total floor area, 127,581 square feet.
Lessor. . . . . Imperial Realty Co., Limited.
Term expires. . . . . May 1, 1916, option of renewal as follows: "At expiration of lease His Majesty shall be entitled by giving notice in writing to lessors not later than May 1, 1915, to renew for five years from May 1, 1916, upon and subject to the same terms and conditions except that the rental to be paid during renewal term shall be mutually agreed upon between the parties."
Rent. . . . . $78,468.94 per annum.
Lessor pays special taxes, heating.
Lessee pays taxes, snow cleaning, water, street sprinkling and lighting.

*No. 146.—Ottawa, Ont.* . . . . . First two flats and basement 326 and 328 Queen street. Floor area, 4,000 square feet.
Occupied by. . . . . Agriculture.
Lessor. . . . . Frank Jarman.
Term expires. . . . . April 1, 1916.
Rent. . . . . $130 per month.
Lessor pays taxes, water and heating.

*No. 147.—Ottawa, Ont.* . . . . . Seven hundred and seventy square feet at 70 cents southeast corner 6th floor Journal building.
Occupied by. . . . . Translator and Assistants of Department of Agriculture.
Lessor. . . . . Journal Printing Co., Ltd.
Term expires. . . . . Yearly.
Rent. . . . . $539 per year.

*No. 148.—Ottawa, Ont.* . . . . . Second, third, fourth and fifth floors of Journal building on Queen street, near Bank, 16,560 square feet at 70 cents (See also additional space for Departments of Agriculture and Interior not inclusive in this lease).
Occupied by. . . . . 2nd floor.—Auditor General Department.
3rd floor.—Interior Department.
6th floor.—Agriculture Department.
3rd, 4th and 5th floor.—Forestry Department.
5th floor.—Ottawa River Works.
5th floor.—Public Works Department.
Lessor. . . . . Journal Printing Co., Limited.
Term expires. . . . . January 12, 1919.
Rent. . . . . $11,592 per annum, see also additional space for Departments of Agriculture and Interior.
Lessor pays all taxes and heating.

*No. 149.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Six hundred and twenty-one square feet at 70 cents in basement Journal building, south-east corner.
Occupied by.. .. .. .. .. .. .. Forestry Branch of Interior.
Lessor... .. .. .. .. .. .. .. Journal Printing Co., Ltd.
Term expires... .. .. .. .. .. Yearly.
Rent.. .. .. .. .. .. .. .. .. $134.70 per annum.

*No. 150.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Rooms 4, 5, 6, 7 and 8 in lessors' building on Rideau street, floor area 1,834 square feet.
Occupied by.. .. .. .. .. .. .. Officer commanding internment operations, Militia and Defence Department.
Lessor... .. .. .. .. .. .. .. La Banque Nationale.
Term expires... .. .. .. .. .. At end of war, with right to lessee to terminate on month's notice to lessor.
Rent.. .. .. .. .. .. .. .. .. $80.25 per month.
Lessor pays all taxes, water, heating and provides elevator service.

*No. 151.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Three stores on ground floor, the whole of 1st and 2nd floors and 4,800 superficial feet of basement of lessor's building, corner Dalhousie and York streets. Total floor area, 18,000 square feet.
Occupied by.. .. .. .. .. .. .. Stationery Branch Printing Bureau.
Lessor... .. .. .. .. .. .. .. Patrick Labelle.
Term expires... .. .. .. .. .. January 2, 1919.
Rent.. .. .. .. .. .. .. .. .. $11,500 per annum.
Lessor pays taxes, water, heat and gives use of elevator.

*No. 152.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Nos. 317, 319 and 321 Queen street, together with the new building thereto annexed. Floor area, 16,000 square feet.
Occupied by.. .. .. .. .. .. .. Analyst and Testing Departments, Inland Revenue.
Lessors.. .. .. .. .. .. .. .. J. B. & W. A. Lamb.
Term expires... .. .. .. .. .. June 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $2,660 per annum.
Lessors pay local improvements, taxes and water.
Lessees pay taxes (excepting as above) and heating.

*No. 153.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Brick building 95 George street, 3,312 square feet.
Occupied by.... .. .. .. .. .. Warehouse room Printing Bureau.
Lessor... .. .. .. .. .. .. .. J. P. Laurin.
Term expires... .. .. .. .. .. From May 1, year to year.
Rent.. .. .. .. .. .. .. .. .. $1,000 per year for first year, that is to May 1, 1914, and $1,200 for second year.
Lessor pays taxes and water.

*No. 154.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Premises two stories high, 64 and 66 George street. Floor area, 4,200 square feet.
Occupied by.. .. .. .. .. .. .. Storage for Militia Department.
Lessor... .. .. .. .. .. .. .. Lord Furniture Co.
Term expires... .. .. .. .. .. February 20, 1916.
Rent.. .. .. .. .. .. .. .. .. $150 per month.
Lessors pay taxes, water and insurance.

*No. 155.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. 1st and 2nd floors of Stephen building, north side Queen street, immediately west of Bank street. Floor area 4,970, rent equals 70 cents per square foot.
Occupied by.... .. .. .. .. .. Stationery Branch Interior.
Lessor... .. .. .. .. .. .. .. The 2 Macs, Ltd.
Term expires... .. .. .. .. .. June 6, 1920.
Rent.. .. .. .. .. .. .. .. .. $3,479 per annum.
Lessors pay all taxes (except water rates), heating and provide elevator service.

*No. 156.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. House No. 72 Elgin street. Floor area, 1,677 square feet.
Occupied by.... .. .. .. .. .. Additional accommodation for Printing and Stationery Department of Militia and Defence.
Lessor... .. .. .. .. .. .. .. Dr. Frederick McKinnon.
Term expires... .. .. .. .. .. October 9, 1915.
Rent.. .. .. .. .. .. .. .. .. $65 per month.
Lessor pays all taxes and water and light.
Lessee provides heating.

*No. 157.—Ottawa, Ont.*.. .. .. .. .. .. .. .. .. .. Third and fourth floors of McNeill-Stewart building, 198 and 200 Queen street. Floor area, 2,893 square feet.
Occupied by.... .. .. .. .. .. Additional accommodation for Auditor General.
Lessor... .. .. .. .. .. .. .. E. R. McNeill and R. G. Stewart.
Term expires... .. .. .. .. .. September 5, 1916.
Rent.. .. .. .. .. .. .. .. .. $1,850 per annum.
Lessors pay taxes and heating and provide elevator service.
Lessee pays water.

*No. 158.—Ottawa, Ont*.. .. .. .. .. .. .. .. .. .. Basement of premises 174, 176 and 178 Wellington street. Floor area, 2,830 square feet.
Occupied by.... .. .. .. .. .. Lithographing Division Survey Branch, Militia and Defence.
Lessor... .. .. .. .. .. .. .. W. H. Martin & Co.
Term expires... .. .. .. .. .. December 4, 1916, with option to renew for two years at same rental.
Rent.. .. .. .. .. .. .. .. .. $900 per annum.
Lessors pay taxes, water, insurance and heating.
Lessees pay light.

*No. 159.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Ground floor and first floor building on Metcalfe street, between Slater and Laurier avenue west, known as "New Masonic Temple," 8,188 square feet at 75 cents a foot.
Occupied by.... .. .. .. .. .. Conservation Commission.
Lessor... .. .. .. .. .. .. .. Ottawa Masonic Temple, Limited.
Term expires... .. .. .. .. .. November 15, 1918.
Rent.. .. .. .. .. .. .. .. .. $6,141 per annum.
Lessor pays taxes, heating and give use of elevator.
Lessee pays water, lighting and cleaning.

*No. 160.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Mezzanine floor 5B and basement, Ottawa Masonic Temple. Floor space 1,017 square feet.
Occupied by.... .. .. .. .. .. Conservation Commission.
Lessor... .. .. .. .. .. .. .. Ottawa Masonic Temple, Ltd.
Term expires... .. .. .. .. .. November 15, 1918.
Rent.. .. .. .. .. .. .. .. .. $636.75 per annum.
Lessor pays all taxes (except water rates) and heating, and provides use of elevator.

*No. 161.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Mills building, 188 Slater street, 3,185 square feet at 18 cents per foot.
Occupied by.... .. .. .. .. .. Storage accommodation Public Works Dept., Ottawa River Works.
Lessor... .. .. .. .. .. .. .. A. K. Mills & Son.
Term expires... .. .. .. .. .. Yearly on 1st April.
Rent.. .. .. .. .. .. .. .. .. $573.30 per annum.

*No. 162.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Whole of building northeast corner of Metcalfe and Slater streets, except 33 by 66 feet of lot upon which building stands, which is not built upon. Floor area 9,764 square feet.
Occupied by.... .. .. .. .. .. Interior and Surveyor General.
Lessor... .. .. .. .. .. .. .. Ottawa Building Co.
Term expires... .. .. .. .. .. May 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $4,000 per annum.
Lessors pay special taxes and insurance
Lessee pays taxes, excepting as above, water, heat, light and cleaning.

*No. 163.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. West half of lot No. 19, on south side of Wellington street, Nos. 102 and 104 Wellington street. Floor area, 5,232 square feet.
Occupied by.... .. .. .. .. .. Interior Department.
Lessor... .. .. .. .. .. .. .. Ottawa Building Co., Ltd.
Term expires... .. .. .. .. .. June 1, 1920.
Rent.. .. .. .. .. .. .. .. .. $2,500 per annum.
Lessors pay special taxes.
Lessee pays taxes, excepting as above, water, street sprinkling and snow cleaning.

*No. 164.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Nos. 98, 100 south side Wellington street, known as "Nagle building." Floor area, 5,506 square feet.
Occupied by.... .. .. .. .. .. Justice Department.
Lessor... .. .. .. .. .. .. .. Ottawa Building Co., Limited.
Term expires... .. .. .. .. .. May 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $2,500 per annum.
Lessors pay special taxes and insurance.
Lessees pay taxes, excepting as above, water, heating, lighting and cleaning.

*No. 165.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Stone building, southwest corner Queen and Metcalfe streets, Nos. 94 and 96 Queen street, also yard. Floor area, 7,129 square feet.

Occupied by.... .. .. .. .. .. Exhibition Branch Agriculture Department.
Lessor... .. .. .. .. .. .. .. Ottawa Improvement Co., Ltd.
Term expires... .. .. .. .. .. Yearly on 1st August.
Rent.. .. .. .. .. .. .. .. .. $1,000 per annum.
Lessor pays special taxes.
Lessee pays taxes, excepting as above, and water.

*No. 166.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Second, third and fourth floors of new Central station building. Floor area, 23,761 square feet.

Occupied by.... .. .. .. .. .. Railway Commission, Board of.
Lessor... .. .. .. .. .. .. .. Ottawa Terminals Railway Co.
Term expires... .. .. .. .. .. November 1, 1916, with option to renew for five years or less under terms to be agreed upon between lessor and lessee.
Rent.. .. .. .. .. .. .. .. .. $19,500 per annum.
Lessors pay taxes, heating and power for elevators.
Lessee pays water and light.

*No. 167.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Basement, ground and first floors, brick building known as Imperial building, south side Queen street, No. 138 (excepting that portion of basement used for heating plant and coal storage). Floor area, 11,162 square feet.

Occupied by.... .. .. .. .. .. Interior Department, Surveyor General.
Lessor... .. .. .. .. .. .. .. Eliza Ann Pearson.
Term expires.... .. .. .. .. .. January 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $5,400 per annum.
Lessor pays taxes and heating.
Lessee pays water and lighting.

*No. 168.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Easement for projection of about two feet beyond line of division between southeast corner of roof of Langevin block and property of G. H Perley.

Lessor... .. .. .. .. .. .. .. C. Jackson Booth.
Term expires.... .. .. .. .. .. October 1, 1918, and is renewable for 21 years at expiry of each 21 years for which period lease is drawn.
Rent.. .. .. .. .. .. .. .. .. $5 per annum.

*No. 169.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Three rooms on 2nd floor and two rooms on 3rd floor in Quebec Bank building, Wellington street. Floor area, 1,500 square feet.

Occupied by.... .. .. .. .. .. Statistical Branch of Railways and Canals.
Lessor... .. .. .. .. .. .. .. Quebec buildings, Limited.
Term expires.... .. .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $1,200 per annum.
Lessor pays taxes, water, insurance and heating.

*No. 170.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Three upper stories of lessors' building, corner Rideau and Sussex streets, 62,907 square feet at 70 cents per foot.

Occupied by.... .. .. .. .. .. Marine and Fisheries and Naval Service.
Lessor... .. .. .. .. .. .. .. A. E. Rea Co., Ltd.
Term expires.... .. .. .. .. .. September 9, 1919.
Rent.. .. .. .. .. .. .. .. .. $44,034.90 per annum.
Lessor pays taxes, heating and elevator service.
Lessee pays water.

*No. 171.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. West office of ground floor of lessors' building, Wellington street, 1,785 square feet.

Occupied by.... .. .. .. .. .. Rural Mail Service.
Lessor... .. .. .. .. .. .. .. The Rideau Club.
Term expires.... .. .. .. .. .. May 1, 1917.
Rent.. .. .. .. .. .. .. .. .. $1,800 per annum.
Lessor pays taxes, water and heating.

*No. 172.—Ottawa, Ont.* .. .. .. .. .. .. .. .. .. Whole of Robinson block south side Queen street between Metcalfe and Elgin streets, except one store and the basements under said store. Floor area 58,272 sq. feet=39⁷⁄₁₀ cents.

*No. 172.—Ottawa, Ont.*—Con.
Occupied by.... .. .. .. .. .. P. O. Department, Public Works Department and Customs Department.
Lessor... .. .. .. .. .. .. .. Hiram Robinson.
Term expires.... .. .. .. .. .. September 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $15,200 per annum.
Lessor pays taxes, water, insurance and provides power for elevators.
Lessee pays heating, lighting and cleaning.

*No. 173.—Ottawa, Ont.* .. .. .. .. .. .. .. .. Premises at 125 Queen street, in Popham & Jarman building, 1,070 square feet.
Occupied by.... .. .. .. .. .. Stationery Branch Interior Department.
Lessor... .. .. .. .. .. .. .. J. L. Rochester and others.
Term expires.... .. .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $75 per month.

*No 174.—Ottawa, Ont.*.. .. .. .. .. .. .. .. Rooms 1, 2, 3, 4, 7, 8, 9 on second floor lessors' building, on southeast corner Sparks and Metcalfe streets.
Occupied by.... .. .. .. .. .. District Engineer and Captain Davey, Public Works.
Lessor... .. .. .. .. .. .. .. Royal Bank of Canada.
Term expires.... .. .. .. .. .. March 18, 1920.
Rent.. .. .. .. .. .. .. .. .. $2,913.30 per annum.
Lessors pay all taxes, water, heating, and provide elevator service.

*No. 175.—Ottawa, Ont.* .. .. .. .. .. .. .. .. Portion lessors' building southwest corner Sparks and Metcalfe streets.
Occupied by.... .. .. .. .. .. Interior Department, Chief Geographer's Branch and the Geographic Board.
Lessor... .. .. .. .. .. .. .. Royal Bank of Canada.
Term expires.... .. .. .. .. .. March 18, 1920.
Rent.. .. .. .. .. .. .. .. .. $4,747.10 per annum.
Lessors pay all taxes, water, heating, and provide elevator service.

*No. 176.—Ottawa, Ont.* .. .. .. .. .. .. .. .. Lot No. 11 south side Wellington street.
Occupied by.... .. .. .. .. .. Public Works Department.
Lessor... .. .. .. .. .. .. .. Slater Estate.
Term expires.... .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. $30 per month.
Lessor pays all taxes and water.

*No. 177.—Ottawa, Ont.* .. .. .. .. .. .. .. .. Building 172 Wellington street, also yard and addition in rear two stories high along with basement. Floor area, 5,752 square feet.
Lessor... .. .. .. .. .. .. .. Northwest Mounted Police.
Occupied by.... .. .. .. .. .. Robert Nicholas Slater.
Term expires.... .. .. .. .. .. March 15, 1910, since which we have been tenants from year to year.
Rent.. .. .. .. .. .. .. .. .. $1,140 per annum.
Lessee pays taxes, water, street sprinkling and snow cleaning.

*No. 178.—Ottawa, Ont.* .. .. .. .. .. .. .. .. Two flats at 109 Rideau street. Floor area, 2,600 square feet.
Occupied by.... .. .. .. .. .. Additional accommodation for Inspection Staff of Department of Militia and Defence.
Lessor.. .. .. .. .. .. .. .. W. R. Stroud.
Term expires.... .. .. .. .. .. February 20, 1916.
Rent.. .. .. .. .. .. .. .. .. $1,677 per annum.
Lessor pays all taxes and heating.
Lessee pays water.

*No. 179.—Pincher Creek, Alta.* .. .. .. .. .. Lower storey of building on west half of lot No. 2, plan 17430.
Occupied by.... .. .. .. .. .. Supervisor of Crows Nest Forest Reserve.
Lessor.. .. .. .. .. .. .. .. Kathleen Levasseur.
Term expires.... .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $30 per month.
Lessor pays all taxes.

*No. 180.—Portage la Prairie, Man.* .. .. .. .. First floor, premises on Tupper street, 40 by 60 feet.
Occupied by.... .. .. .. .. .. Customs Examining Warehouse.
Lessor.. .. .. .. .. .. .. .. John J. Garland.
Term expires.... .. .. .. .. .. April 8, 1918.
Rent.. .. .. .. .. .. .. .. .. $35 per month.
Lessor pays all taxes.
Lessee pays heating and $5 a month to janitor.

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*No. 181.—Port Arthur, Ont.* .. .. .. .. .. .. .. Room No. 9, second floor corner Lorne and Cumberland streets.
Occupied by.... .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. Bank of Hamilton.
Term expires.... .. .. .. .. .. November 15, 1915.
Rent.. .. .. .. .. .. .. .. .. $30 per month.

*No. 182.—Port Arthur, Ont.* .. .. .. .. .. .. .. Premises in "Crooks block."
Occupied by.... .. .. .. .. .. Engineers P. W. Department.
Lessor.. .. .. .. .. .. .. .. Originally J. J. Carrick, now Royal Bank of Canada.
Term expires.... .. .. .. .. .. Monthly at end of each month.
Rent.. .. .. .. .. .. .. .. .. $55 per month.

*No. 183.—Prince Albert, Sask.* .. .. .. .. .. .. Premises.—Ground floor in Herald block, south side 11th street west, between 1st and 2nd avenues west, 1,286 square feet, rent equals 93½ cents per square foot.
Occupied by.... .. .. .. .. .. District Engineer.
Lessor.. .. .. .. .. .. .. .. Herald Building, Ltd.
Term expires.... .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $100 per month.
Lessors pay taxes, water, heating and provide elevator service.

*No. 184.—Prince Albert, Sask.* .. .. .. .. .. .. Main office. Floor area, 1,440 square feet, with fireproof vault and private lavatory in main floor, also storeroom in basement having a floor area of 433 square feet in lessors' building on south side 10th street.
Occupied by.... .. .. .. .. .. Forestry Branch Interior Department.
Lessor.. .. .. .. .. .. .. .. Prince Albert Masonic Temple Co., Ltd.
Term expires.... .. .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $125 per month.
Lessors pay all taxes, water and heating.

*No. 185.—Prince Rupert, B.C.* .. .. .. .. .. .. Part of lessor's wharf.
Occupied by.... .. .. .. .. .. Site for Immigration Hall.
Lessor.. .. .. .. .. .. .. .. Grand Trunk Pacific Ry. Co.
Term expires.... .. .. .. .. .. November 20, 1915, and thence from year to year. Lessee may determine any time on three months' notice.
Rent.. .. .. .. .. .. .. .. .. $5 per annum.

*No. 186.—Prince Rupert, B.C.* .. .. .. .. .. .. First story of lessor's building on 1st avenue.
Occupied by.... .. .. .. .. .. Examining warehouse.
Lessor.. .. .. .. .. .. .. .. Joseph Edward Merryfield, now Allan Campbell.
Term expires.... .. .. .. .. .. June 1, 1917.
Rent.. .. .. .. .. .. .. .. .. $175 per month.
Lessor pays taxes, water, heating and janitor service.

*No. 187.—Prince Rupert, B.C.* .. .. .. .. .. .. Whole of ground floor together with rooms Nos. 1 to 9 inclusive on first floor of lessor's building, known as the "Federal Block."
Occupied by.... .. .. .. .. .. Inland Revenue, Marine and Fisheries, Post Office and Customs and Public Works Departments.
Lessor.. .. .. .. .. .. .. .. Northern B. C. Development Co.
Term expires.... .. .. .. .. .. June 1, 1916, with option to renew for another year on same terms and conditions on giving lessors 6 months' notice in writing before expiry of present lease.
Rent.. .. .. .. .. .. .. .. .. $500 per month.
Lessors pay taxes and heating.
Lessee pays water.

*No. 188.—Prince Rupert, B.C.*.. .. .. .. .. .. Two rooms in Federal building. Floor space, 344 square feet, which equals 88 cents per square foot rental.
Occupied by.... .. .. .. .. .. Captain Davies, Examiner. Masters and Mates, Marine and Fisheries Department.
Lessor... .. .. .. .. .. .. .. Northern B. C. Development Cor.
Term expires.. .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $25 per month.
Lessors pay taxes and heating.

*No. 189.—Quebec, Que.* .. .. .. .. .. .. .. .. Offices in building, 103 St. John street.
Occupied by.... .. .. .. .. .. Engineer in connection with river St. Charles improvement.
Term expires.. .. .. .. .. .. May 1, 1916.
Lessor.. .. .. .. .. .. .. .. J. S. Bergeron.
Rent.. .. .. .. .. .. .. .. .. $350 per annum.
Lessor pays taxes, water, heating, lighting and cleaning.

No. 190.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Whole of second floor, 101 St. John street, also toilet room.
Occupied by.... .. .. .. .. Colonization Agent.
Lessor... .. .. .. .. .. .. J. S. Bergeron.
Term expires.. .. .. .. .. April 30, 1916.
Rent.. .. .. .. .. .. .. .. $450 per annum.
Lessor pays taxes, heat and light.

No. 191.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Ground floor (1,761 square feet) and portion of basement (1,216 square feet) in Dominion building, St. Peter street.
Occupied by... .. .. .. .. P. O. station "B."
Lessor... .. .. .. .. .. .. Dominion Fish and Fruit, Ltd.
Term expires.. .. .. .. .. May 1, 1918.
Rent.. .. .. .. .. .. .. .. $3,000 per annum.
Lessor pays taxes, water, heating, cleaning and removal of snow.

No. 192.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Room 15 x 14 in lessor's premises.
Occupied by.... .. .. .. .. J. A Simard of Seeds Branch of Agriculture Department.
Lessor... .. .. .. .. .. .. .. Mrs. M. M. Germain, 38 Ste. Anne st., Quebec.
Term expires.. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $25 per month.
Lessor provides telephone and telephone service and caretaking and part furnishings and pays for heating and lighting.

No. 193.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Brick house and grounds on Little River road.
Occupied by.... .. .. .. .. House for Medical Superintendent, Quebec Immigration Hospital.
Lessor... .. .. .. .. .. .. .. John Jack.
Term expires.. .. .. .. .. May 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $600 per annum.
Lessor pays taxes and water.

No. 194.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Room 17 by 16 feet, No. 1, Couillard street, upper floor.
Occupied by.... .. .. .. .. P. O. Case Examiner, D. Blondeau.
Lessor... .. .. .. .. .. .. .. Mrs. O. Paris.
Term expires.. .. .. .. .. Letter of Mrs. Paris of May 14, 1914, says Department may keep office as long as wanted, but not less than a year.
Rent.. .. .. .. .. .. .. .. .. $20 per month.
Lessor pays taxes, water, snow cleaning, heating, lighting and caretaking.

No. 195.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. One thousand eight hundred square feet at $1.25 per square foot. Rooms 500, 501, 502 and 503 on 5th floor lesor's building, corner of St. Joseph and Crown streets, Quebec.
Occupied by.... .. .. .. .. District Engineer.
Lessor... .. .. .. .. .. .. .. Quebec Railway, Light, Heat and Power Co.
Term expires.. .. .. .. .. March 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $2,250 per annum.
Lessor pays taxes, water, heat, elevator service and janitor.

No. 196.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. One room, Richelieu & Ontario Navigation Co.'s building.
Occupied by... .. .. .. .. .. General Superintendent of Pilots and Montreal Pilots.
Lessor... .. .. .. .. .. .. .. Richelieu and Ontario Navigation Co.
Term expires.. .. .. .. .. June 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $70 per month.
Lessor pays taxes, water and heating.
Lessee pays lighting.

No. 197.—*Quebec, Que.* .. .. .. .. .. .. .. .. .. Two offices, 3rd floor, 116 Mountain Hill street.
Occupied by.... .. .. .. .. .. Captain Lachance for Marine School officers.
Lessor... .. .. .. .. .. .. .. Arthur E. Scott.
Term expires.. .. .. .. .. April 30, 1918, with right to lessee to terminate on May 1 of each of 4 years and 11 months from June 1, 1913, provided notice in writing is given to lessor on or before February 1 previous; and in case of sale of premises lessor has right to terminate on May 1 each year on written notice on or before February 1 previous.
Rent.. .. .. .. .. .. .. .. .. $325 per annum.
Lessor to place and maintain in good order the inside blinds and put in place and remove in due time the double windows and outside blinds. Lessor pays taxes, water, heat, light and cleaning.

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*No. 198.—Quebec*.. .. .. .. .. .. .. .. .. .. .. Part of lessors building, 35 Chemin Ste. Foye.
Occupied by... .. .. .. .. .. Candiac postal station.
Lessor... .. .. .. .. .. .. .. J. Paul Tardival.
Term expires.. .. .. .. .. .. Sept mber 1, 1917.
Rent.. .. .. .. .. .. .. .. .. $300, of which postm ster pays $175, and Government $125.
Lessor pays all taxes, water, cleaning and heating.

*No. 199.—Quebec, Que*.. .. .. .. .. .. .. .. .. Three rooms, one vault and vestibule, 23 St. Louis street.
Occupied by... .. .. .. .. .. Archives
Lessor... .. .. .. .. .. .. .. Miss Margaret White
Term expires.. .. .. .. .. .. April 30, 1916.
Rent.. .. .. .. .. .. .. .. .. $10 per month.
Lessor pays taxes, water, heat, removal of snow.

*No. 200.—Regina, Sask*.. .. .. .. .. .. .. .. .. Ground floor in Foret building, South Railway street.
Occupied by... .. .. .. .. .. Customs Express and Examining Warehouse.
Lessor... .. .. .. .. .. .. .. Gabriel E. Foret.
Term expires.. .. .. .. .. .. October 1, 1915.
Rent.. .. .. .. .. .. .. .. .. $250 per month
Lessor pays taxes, water, and heats "front of said premises."
Lessee pays light and caretaking.
To be removed to ground floor of Dominion Lands Building recently vacacated by Provincial Government.

*No. 201.—Regina, Sask*.. .. .. .. .. .. .. .. .. Two rooms in Westman chambers, Roy street. Floor area 270 square feet, which equals $1.22½ per square foot.
Occupied by... .. .. .. .. .. Inland Revenue.
Lessor... .. .. .. .. .. .. .. The J. A. Westman agency.
Term expires.. .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $30 per month.
Lessors pay taxes except business tax, provide water service and heating.

*No. 202.—Revelstoke, B.C*.. .. .. .. .. .. .. .. Rooms 1, 4 and 5, on 2nd floor, Canadian Bank of Commerce building.
Occupied by... .. .. .. .. .. Dominion Lands agent.
Lessor... .. .. .. .. .. .. .. Canadian Bank of Commerce.
Term expires.. .. .. .. .. .. February 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $75 per month.
Lessor pays taxes, heat and caretaking.
Lessee pays lighting.

*No. 203.—Revelstoke, B.C*.. .. .. .. .. .. .. .. Rooms 2 and 3 of Canadian Bank of Commerce building.
Occupied by... .. .. .. .. .. Chief Fire Ranger.
Lessor... .. .. .. .. .. .. .. Canadian Bank of Commerce.
Term expires.. .. .. .. .. .. December 16, 1916.
Rent.. .. .. .. .. .. .. .. .. $50 per month.
Lessor pays all taxes, heating and cleaning.

*No 204.—Ridgetown, Ont*.. .. .. .. .. .. .. .. Portion of municipal building.
Occupied by... .. .. .. .. .. Post office.
Lessor... .. .. .. .. .. .. .. Town of Ridgetown.
Term expires.. .. .. .. .. .. Dec mber 1, 1915.
Rent.. .. .. .. .. .. .. .. .. $525 per annum of which $300 is paid by Government and $225 by postmaster.
Lessors pays all taxes. Lessors provide heat and light at a cost to the Postmaster not exceeding $150 per annum.

*No. 205.—Roblin, Man*.. .. .. .. .. .. .. .. .. Second floor, lot 6 in block 4 in townsite of Roblin, Man. Registered Plan No. 352.
Occupied by... .. .. .. .. .. Supervisor of Riding Mountain Reserve.
Lessor... .. .. .. .. .. .. .. Frederick Young Newton.
Term expires.. .. .. .. .. .. December 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $27.50 per month.
Lessor pays taxes, heat, light and cleaning.

*No. 206.—Rocky Mountain, Alta*.. .. .. .. .. .. Whole of a frame metal covered building on Center street.
Occupied by... .. .. .. .. .. Forest Supervisor.
Lessor... .. .. .. .. .. .. .. Mary Catherine Green, wife of T. D. Green.
Term expires.. .. .. .. .. .. Month to month.
Rent.. .. .. .. .. .. .. .. .. $25 per month.
Lessor pays all taxes.

**No. 207.**—*Ruby Lake, Sask.*.. Room on 2nd story of Ruby Lake Lumber Co.'s office, also stable accommodation for two ponies and storage for hay.
Occupied by.. Forest Supervisor.
Lessor.. Ruby Lake Lumber Co.
Term expires.. Month to month.
Rent.. $15 per month.
Lessors pay all taxes, water, heating and provide cleaning and janitor service.

**No. 208.**—*St. Anne de Bellevue, Que.*.. Room 25 by 25 feet in municipal building, with use of shed for storage of wood and coal.
Occupied by.. Post office.
Lessor.. Municipality of St. Anne de Bellevue.
Term expires.. From year to year on June 1, each year.
Rent.. $250 per annum.
Lessors pay taxes, water, removal of snow.
Lessee pays heating and lighting.

**No. 209.**—*St. Eustache, Que.*.. Part of first floor of town hall—524 feet 3 in.
Occupied by.. Post office.
Lessor.. Village of St. Eustache.
Term expires.. February 1, 1919.
Rent.. $300 per annum.
Lessor pays all taxes, heating and snow cleaning.

**No. 210.**—*St. Félix de Valois, Que.*.. Room in front of a brick veneered house, south side Main street.
Occupied by.. Post office.
Lessor.. Maxime Crepeau.
Term expires.. Yearly on February 23 each year.
Rent.. $100 per annum; $38 by Post Office and $62 by Public Works Department.
Lessor pays taxes, water, removal of snow from roof, heat, light and cleaning.

**No. 211.**—*St. Gabriel de Brandon, Que.*.. First story of house on north corner Michaud and St. Pierre streets.
Occupied by.. Post office.
Lessor.. Télesphore Michaud.
Term expires.. Month to month.
Rent.. $200 per annum.
Lessor pays taxes, heat, removal of snow from roof and cleaning.
Lessee pays lessor $48 a year for lighting.

**No. 212.**—*St. Georges de Beauce, Que.*.. First story of building, 20 by 30 feet.
Occupied by.. Post office.
Lessor.. Mrs P. L. Moisan.
Term expires.. September 1, 1917, with option of renewal for another 5 years on same terms.
Rent.. $300 per annum. $200 paid by Department and $100 paid by Postmaster.
Lessor pays taxes, removal of snow, heat, light and cleaning.

**No. 213.**—*St. Jean de Matha, Que.*.. Wooden house, 36 by 40 feet, 2 stories, No. 300 of first row, St. Louise.
Occupied by.. Post office.
Lessor.. J. Baptiste Turcotte.
Term expires.. July 1, 1916.
Rent.. $44 per annum of which Postmaster pays $19 and Department 25.
Lessor pays taxes, heating and removal of snow.

**No. 214.**—*St. John, N.B.*.. Three rooms on third floor of Board of Trade building, 162 Prince William street.
Occupied by.. Resident Engineer G. W. Steeves, in connection with harbour improvements.
Lessor.. St. John Board of Trade.
Term expires.. June 1, 1916.
Rent.. $300 per annum. Rent charged to St. John Harbour improvements.
Lessor pays heating, lighting janitor.

**No. 215.**—*St. John, N.B.*.. Six offices in upper flat of Canadian Bank of Commerce building.
Occupied by.. Dr. Frink, V.S., of Department of Agriculture, Engineer M. & F., Examiner Masters and Mates, and Navigation School.

*No. 215.—St. John, N.B.*—Con

Lessor.. .. .. .. .. .. .. .. .. Canadian Bank of Commerce.
Term expires.. .. .. .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. $1,200 per annum.
Lessors pay taxes and heating.
Lessee pays water.

*No. 216.—St. John, N.B.*.. .. .. .. .. .. .. .. Second story of No. 4 Wharf Warehouse and Ramp.
Occupied by.. .. .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. .. City of St. John.
Term expires.. .. .. .. .. .. .. Year to year from December 31.
Rent.. .. .. .. .. .. .. .. .. .. $2,105.32 per annum.
Lessees pay City of St. John consumption rates for water supplied.

*No. 217.—St. John, N.B.*.. .. .. .. .. .. .. .. Lot, upper end No. 5, Warehouse, Sand Point.
Occupied by.. .. .. .. .. .. .. Site for construction of a shelter at Sand Point for the ship labourers.
Lessor.. .. .. .. .. .. .. .. .. City of St. John, N.B.
Term expires.. .. .. .. .. .. .. January 1, 1918. Renewable for other seven years, but should lessor refuse to renew, then city to pay lessee the sum spent in improvements.
Rent.. .. .. .. .. .. .. .. .. .. Two cents per annum.
No taxes.

*No. 218.—St. John, N.B.*.. .. .. .. .. .. .. .. Ground rent for portion of site of Customs House.
Lessor... .. .. .. .. .. .. .. .. City of St. John, N.B.
Rent.. .. .. .. .. .. .. .. .. .. $22 per annum.

*No. 219.—St. John, N.B.*.. .. .. .. .. .. .. .. Extension wire for regulation of P. O. clock.
Lessor... .. .. .. .. .. .. .. .. N. B. Telephone Co.
Rent.. .. .. .. .. .. .. .. .. .. $10 per annum.

*No. 220.—St. Leonards, N.B.*.. .. .. .. .. .. .. Room in Immigration Inspector's house.
Occupied by.... .. .. .. .. .. Immigration Inspector.
Lessor... .. .. .. .. .. .. .. .. Ozite Roy.
Term expires.. .. .. .. .. .. .. Monthly at end of each month.
Rent.. .. .. .. .. .. .. .. .. .. $7 per month.

*No. 221.—St. Rose, Que.*.. .. .. .. .. .. .. .. Ground floor of school house.
Occupied by... .. .. .. .. .. Post office.
Lessor... .. .. .. .. .. .. .. .. Village of St. Rose, Que.
Term expires.. .. .. .. .. .. May 1, 1917, with option of renewal for five years at same terms on mutual consent of the parties. Lessor entitled to three months' notice of renewal.
Rent.. .. .. .. .. .. .. .. .. .. $200 per annuf, of which postmaster pays $38 and Department $162.
Lessor pays taxes, water, removal of snow, heat and light.

*No. 222.—St. Stephen, N.B.*.. .. .. .. .. .. .. Rooms in building, corner King and Water streets, with right to use of basement for storage of fuel, etc., and right of entrance from Water street.
Occupied by... .. .. .. .. .. Immigration office.
Lessors.. .. .. .. .. .. .. .. .. Originally John D. Chipman, now David Johnson.
Term expires.. .. .. .. .. .. .. August 13, 1916.
Rent.. .. .. .. .. .. .. .. .. .. $150 per annum.

*No. 223.—Salmon Arm, B.C.*.. .. .. .. .. .. .. Three rooms in rear of Bank of Hamilton building.
Occupied by... .. .. .. .. .. Chief Fire Ranger.
Lessor... .. .. .. .. .. .. .. .. J. Robb, Manager, Bank of Hamilton.
Term expires.. .. .. .. .. .. October 31, 1915.
Rent.. .. .. .. .. .. .. .. .. .. $12 per month.
Lessor pays all taxes, cleaning and lighting.

*No. 224.—Saskatoon, Sask*.. .. .. .. .. .. .. .. Two rooms in lessor's premises with use of lane for entrance, also use of lavatory in common with other tenants.
Occupied by... .. .. .. .. .. Inspector of Weights and Measures.
Lessor... .. .. .. .. .. .. .. .. John H. Cameron and Annie M. Johnstone.
Term expires.. .. .. .. .. .. .. November 11, 1915, with option of renewal for one year.
Rent.. .. .. .. .. .. .. .. .. .. $126 per month.
Lessors pay heating and lighting.

No. 225.—*Saskatoon, Sask.*.. .. .. .. .. .. .. Suites Nos. 412 and 415 in lessor's building, corner of 21st street and 1st avenue.
Occupied by.... .. .. .. .. Superintendent Railway Mail Service and Staff.
Lessor... .. .. .. .. .. .. Imperial Canadian Trust Co.
Term expires., .. .. .. .. May 1, 1916.
Rent.. .. .. .. .. .. .. .. $631.20 per annum.
Lessor pays all taxes, water service, heating, cleaning and elevator service.

No. 226.—*Saskatoon, Sask.*.. .. .. .. .. .. .. Suite No. 212, in building corner 21st street and 1st avenue, known as the Canada building. Floor area, 477 square feet.
Occupied by.. .. .. .. .. .. Excise Inland Revenue.
Lessor.. .. .. .. .. .. .. .. Imperial Canadian Trust Co.
Term expires.. .. .. .. .. .. November 1, 1916.
Rent.. .. .. .. .. .. .. .. $600 per annum.
Lessors pay taxes, heating, cleaning and power for elevator.
Lessee pays lighting.

No. 227.—*Saskatoon, Sask.*.. .. .. .. .. .. .. Ground floor, lessor's building, corner 23rd street and second avenue; floor area, 3,700 square feet.
Occupied by.. .. .. .. .. .. Customs.
Lessor.. .. .. .. .. .. .. .. Chester Thompson.
Term expires.. .. .. .. .. .. December 12, 1915, with option to renew for one year on three months' notice to lessor, prior to expiry of lease.
Rent.. .. .. .. .. .. .. .. .. $500 per month.
Lessor pays taxes, water, heating and cleaning.

No. 228.—*Saskatoon, Sask.*.. .. .. .. .. .. .. Ground floor and part of basement, solid brick and terra cotta store building, N.E. corner 20th street and 3rd avenue. Floor area of ground floor, 1,664 square feet; floor area of basement, 676 square feet.
Occupied by.. .. .. .. .. .. Examining warehouse.
Lessor.. .. .. .. .. .. .. .. J. H. C. Willoughby and A. J. E. Summer.
Term expires.. .. .. .. .. .. June 17, 1916.
Rent.. .. .. .. .. .. .. .. .. $1,800 per annum.
Lessors pay all taxes except business tax, water and heating.

No. 229.—*Saskatoon, Sask.*.. .. .. .. .. .. .. Northwest corner of 3rd avenue and 22nd street, in new fireproof building with basement and ground floor only.
Occupied by.. .. .. .. .. .. Lands office.
Lessor.. .. .. .. .. .. .. .. Wilson Bros.
Term expires.. .. .. .. .. .. October 1, 1915, with option of renewal for one year on same terms and conditions.
Rent.. .. .. .. .. .. .. .. .. $300 per month.
Lessors pay taxes, water, heating (steam heat).
Lessee pays lighting and caretaking.

No. 230.—*Sherbrooke, Que.*.. .. .. .. .. .. .. Whole of first floor of a building, bearing civic Nos. 3, 5 and 7, Albert street. Floor area, 2,714 square feet. Rent equals 36 cents per square foot.
Occupied by.. .. .. .. .. .. Post Office Inspector.
Lessor.. .. .. .. .. .. .. .. E. J. L. Page and James R. Sangster, carrying business as Page Printing and Binding Co.
Term expires.. .. .. .. .. .. September 15, 1918, with option to renew for five years on same terms and conditions; but lessees have privilege to terminate present lease on September 15, 1917, or the renewal thereof at the end of third or fourth year of said renewal period by giving lessors three months' notice in writing, three months previous to May 1, 1917, or previous to the expiration of said fourth year, notice in writing of his intention to terminate this lease at said date or the renewal thereof at the end of the third or fourth year.
Rent.. .. .. .. .. .. .. .. .. $996 per annum.
Lessors pay taxes, water, insurance, heating, cleaning, including halls and provide power for freight elevator, which can be used day and night in common with other tenants.

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*No. 231.—Sherbrooke, Que.* .. Portion of top floor and use of two vaults in lessor's building. Floor area, 1,863 sq. ft.
Occupied by .. District Engineer, Public Works Department.
Lessor .. Quebec Central Railway.
Term expires .. February 1, 1917, with option to renew for two years on three months' notice in writing, prior to expiry of lease.
Rent .. $1,400 per annum.
Lessors pay taxes, water, heat, cleaning, elevator service.

*No. 232.—Shoal Lake, Man.* .. Front room in Town Hall 16 x 35 feet and exclusive use of vault.
Occupied by .. Post office.
Lessor .. Town of Shoal Lake, Man.
Term expires .. March 1, 1918, with option to renew for 3 years on 3 months' notice prior to expiry of lease.
Rent .. $360 of which Postmaster pays $180 and Government $180.
Lessors pay taxes, water, heating, lighting, snow cleaning and janitor.

*No. 233.—Swan River, Man.* .. Southwest corner room in lessor's law office.
Occupied by .. Immigration.
Lessor .. Benjamin E. Rothwell.
Term expires .. September 5, 1916.
Rent .. $15 per month.

*No. 234.—Swift Current, Sask.* .. Two shops fronting on Railway street, the corner shop and four shops immediately adjoining the corner shop to the north, situate on east side of 10th avenue, 50 feet on Railway street and 77 feet on Tenth avenue.
Occupied by .. Post office.
Lessor .. Geo. De la Salle, rancher, Calgary.
Time expires .. November 20, 1915.
Rent .. $1,800 per annum.
Lessor pays taxes and insurance.

*No. 235.—Swift Current, Sask.* .. Portion of first floor, new brick building on lot 10, block 66; floor area, 2,200 square feet.
Occupied by .. Lands.
Lessor .. J. A. Johnson.
Term expires .. December 1, 1915.
Rent .. $2,100 per anum.
Lessor pays taxes, water and heating.

*No. 236.—Sydney, N.S.* .. Room 3 and 4 a in "Post" building; floor area, 591·21 = 60 cents per square foot.
Occupied by .. A. G. McLeod, Inspector of Fisheries.
Lessor .. J. S. McLennan, of Petersfield, Sydney, N.S.
Time expires .. One year.
Rent .. $30 per month.
Lessor pays heat, light and provides janitor service.

*No. 237.—Sydney, N.S.* .. Room 5 in Post building, Dorchester street.
Occupied by .. V. Mullins, sub-agent Marine and Fisheries.
Lessor .. J. S. McLennan, of Petersfield, Sydney, N.S.
Time expires .. May 1, 1918.
Rent .. $180 per annum.
Lessor pays taxes, water, snow cleaning, heating and janitor service.

*No. 238.—Three Rivers, Que.* .. First floor of a building, corner Notre Dame and St. Antoine streets. Floor area, 35 by 23 feet.
Occupied by .. Post Office Inspector.
Lessor .. Knights of Columbus Council 1001.
Term expires .. May 1, 1919. Five years lease from May 1, 1914, with option to lessee to terminate at expiry of each year on 3 months' notice in writing prior to end of year.
Rent .. $420 per annum.
Lessor pays taxes, water and heat.

*No. 239.—Tignish, P.E.I.* .. 6,000 square feet land at Tignish.
Occupied by .. Site for post office.
Lessor .. Intercolonial Railway.
Time expires .. At pleasure of lessors.
Rent .. $1 per annum.
Lessee pays all taxes.

*No. 240.—Toronto, Ont.*.. Premises at 758 Queen street.
Occupied by.. P. O. Station "G."
Lessor.. Mrs. Mary A. Barrett.
Term expires.. December 1, 1914, and thereafter under the same terms and conditions on a monthly tenancy until such time as P. O. Station "G," now under construction on the corner of Queen E. and Saulter streets, is ready for occupation.
Rent.. $200 per month.
Lessor pays taxes, water, insurance and heating.

*No. 241.—Toronto, Ont.*.. Offices Nos. 542, 543, 544, 545, and vaults Nos. Nos. 125, 126 and 127.
Occupied by.. District Engineer.
Lessor.. Confederation Life Association.
Time expires.. September 14, 1916.
Rent.. $2,500 per annum.
Lessors pay taxes, water, heating, caretaking, and provide use of elevators.

*No. 242.—Toronto, Ont.*.. Office No. 703, together with vault No. 141 in lessors' building; floor area, 385 square feet.
Occupied by.. Resident Engineers (Harbour Improvements).
Lessor.. Confederation Life Association.
Time expires.. December 31, 1915.
Rent.. $575 per annum.
Lessors pay taxes, water, heating, janitor work and caretaker, and provide elevator service.

*No. 243.—Toronto, Ont.*.. Five offices on second floor, 32 Front street West. Floor area, 1,080 square feet.
Occupied by.. Steamboat Inspector.
Lessor.. Geo. J. Foy, Ltd.
Time expires.. December 11, 1915.
Rent.. $1,300 per annum.
Lessors pay taxes, water, heat and caretaking.

*No. 244.—Toronto, Ont.*.. Room 23 in Foy building.
Occupied by.. Henry W. King, Inspector of Masters and Mates.
Lessor.. Geo. J. Foy, Ltd.
Term expires.. Monthly at end of each month.
Rent.. $30 per month, and $3.33½ per month for caretaking.

*No. 245.—Toronto, Ont.*.. Part of Union Station with use of lavatories.
Occupied by.. Immigration.
Lessor.. Grand Trunk Railway Co.
Term expires.. Year to year from January 1, but lessors have right to terminate at any time on one month's notice in writing.
Rent.. $1,000 per annum.
Lessors pay taxes (except taxes on personal property, which lessees pay) heat and light.
Lessees pay water.

*No. 246.—Toronto, Ont.*.. Part of water lot No. 48, on registered plan 5a, S.W. corner of Front and Lorne streets, with company's building thereon.
Occupied by.. P.O. Station "A."
Lessor.. Grand Trunk Railway.
Term expires.. Month to month. Railway to have right to terminate lease by giving one month's notice in writing—changed to three months' notice when additional space taken, September 2, 1910.
Rent.. $200 per month.
Lessors pay taxes.

*No. 247.—Toronto, Ont.*.. Additional space in Union Station building, beyond space now occupied.
Occupied by.. P.O. Station "A."
Lessor.. Grand Trunk Railway.
Term expires.. Month to month. Lease of whole of premises now to run from month to month to be terminated by either on three months' notice in writing.
Rent.. $100 per month.
Lessors pay heating and lighting.

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*No. 248.—Toronto, Ont.*.. .. .. .. .. .. .. .. Little Union Hotel, 19 Simcoe street.
Occupied by.. .. .. .. .. .. .. Immigration.
Lessor... .. .. .. .. .. .. .. Geo. B. Hance.
Term expires.. .. .. .. .. .. .. April 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $127.50 per month.
Lessor pays all taxes.

*No. 249.—Toronto, Ont.*.. .. .. .. .. .. .. .. Ground floor of a three-story brick building on west side of Main street, East Toronto, with right of way over the yard from side entrance to lane and right of way over the lane in rear to Gerard street.
Occupied by.. .. .. .. .. .. .. Postal Station "H."
Lessor.. .. .. .. .. .. .. .. Andrew McMillan and Wm. Costain.
Term expires.. .. .. .. .. .. .. October 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $75 per month.
Lessors pay all taxes and heating.

*No. 250.—Toronto, Ont.*.. .. .. .. .. .. .. .. Ground floor and basement of premises S.W. corner of Bloor and Markham streets.
Occupied by.. .. .. .. .. .. .. Postal Station "E."
Lessor.. .. .. .. .. .. .. .. Alexander Mullin.
Term expires.. .. .. .. .. .. .. August 1, 1916, with option to renew for three years on same terms.
Rent.. .. .. .. .. .. .. .. .. $1,440 per annum.
Lessor pays taxes and heating.
Lessee pays water.

*No. 251.—Toronto, Ont.*.. .. .. .. .. .. .. .. Portion of premises in Rossin House block—store No. 121 King street west, with basement beneath same.
Occupied by.. .. .. .. .. .. .. Postal Station "B."
Lessor.. .. .. .. .. .. .. .. Rosin House Hotel Co.
Term expires.. .. .. .. .. .. .. August 8, 1915.
Rent.. .. .. .. .. .. .. .. .. $1,800 per annum.
Lessors pay special taxes and heating.
Lessee pays water.

*No. 252.—Transcona, Man.*.. .. .. .. .. .. .. Ground floor and basement of central portion of building on lots 22, 23 and 24, in block 22, and grounds in connection with same.
Occupied by.. .. .. .. .. .. .. Post office.
Lessor.. .. .. .. .. .. .. .. Wm. McFarlane.
Term expires.. .. .. .. .. .. .. April 1, 1918.
Rent.. .. .. .. .. .. .. .. .. $900 per annum—$650 paid by the Department and $250 by postmaster.
Lessor pays taxes, water, heat, light and cleaning.

*No. 253.—Trois Pistoles, Que.*.. .. .. .. .. .. Portion of ground floor Town Hall building
Occupied by.. .. .. .. .. .. .. Post office.
Lessor... .. .. .. .. .. .. .. Town of Trois Pistoles.
Term expires.. .. .. .. .. .. .. Yearly on October 1.
Rent.. .. .. .. .. .. .. .. .. $100 per annum.
Lessors pay taxes, removal of snow. Postmistress pays water, heating, lighting and cleaning.

*No. 254.—Unity, Sask.*.. .. .. .. .. .. .. .. Lots 27, 28 and 29, block 6, in townsite of Unity.
Occupied by .. .. .. .. .. .. .. Immigration building.
Lessor.. .. .. .. .. .. .. .. Grand Trunk Pacific Development Co.
Time expires.. .. .. .. .. .. .. April 1, 1931, with option to renew for 21 years more at same rental
Rent.. .. .. .. .. .. .. .. .. $1 per annum.

*No. 255.—Vancouver, B.C.*.. .. .. .. .. .. .. Rooms 614, 615, 617 and 618 in Birks' building, on 6th floor; 1,118 square feet equals $1.46\frac{1}{2}$ per square foot.
Occupied by .. .. .. .. .. .. .. Superintendent of Dredges.
Lessor.. .. .. .. .. .. .. .. Wm. Massay Birks, John Henry Birks and Gerald Walker Birks, Montreal.
Term expires.. .. .. .. .. .. .. November 30, 1915.
Rent.. .. .. .. .. .. .. .. .. $1,620 per annum.
Lessors pay heat, light to extent of 29 lamps of 25 Watts, janitor and elevator service.
Voluntary reduction of 20 per cent on rental offered by lessors and accepted May 26, 1915, reducing rent from April 1, 1915 to $1,296.

*No. 256.—Vancouver, B.C.*.. Two rooms, Empire building, 603 Hastings street, W. Vancouver. Floor area, 748 square feet.
Occupied by .. Captain Charles Eddie, Examiner of Masters and Mates.
Lessor.. Julius A. Brown.
Term expires.. Monthly at end of each month.
Rent.. $40 per month.

*No. 257.—Vancouver, B. C.*.. Room in lessor's railway depot, 2,524 square feet at $1.22 per square foot.
Occupied by .. Sorting room P.O. Department.
Lessor.. Canadian Pacific Railway.
Term expires.. August 1, 1919.
Rent.. $3,079.28 per annum.
Lessors pay all taxes and heating.

*No. 258.—Vancouver, B.C.*.. Three rooms on 2nd floor. Chinese detention shed adjacent to shed. No. 1 wharf front, Vancouver, and right of access over lessor's property by usual channels.
Occupied by .. Office of Immigration and temporary detention of immigrants and storage.
Lessor.. Canadian Pacific Railway.
Term expires.. Year to year from January 1.
Rent.. $25 per month.

*No. 259.—Vancouver, B.C.*.. Portion of Burrard Inlet, adjoining lot 185, group 1, New Westminster district, in city of Vancouver.
Occupied by .. Site for detention shed.
Lessor.. Canadian Pacific Railway.
Term expires.. May 1, 1934. Renewable at expiry of every 21 years.
Rent.. $1 per annum.
Lessee pays taxes.

*No. 260.—Vancouver, B.C.*.. Cavity under sidewalk, situated on east side of Howe street, and having a superficial area of 107 superficial feet.
Lessor.. City of Vancouver.
Term expires.. On one month's written notice at any time.
Rent.. $5.35 yearly.

*No. 261.—Vancouver, B.C.*.. Ground floor building, west side Main street between Sixteenth and Seventeenth avenue, bearing civic No. 3235 Main street, and also one room on Seventeenth avenue 18 by 65 feet.
Occupied by .. Post Office Station "C."
Lessor.. Geo. Wm. Dunlap.
Term expires.. Month to month.
Rent.. $90 per month.
Lessor pays all taxes and provides such water service as is supplied by Municipality of South Vancouver, also heating.

*No. 262.—Vancouver, B.C.*.. First, second, third and fourth floors, 249 Hastings street east. Total square feet in this and in premises rented under lease 9542—5,814 square feet.
Occupied by .. P.O. "B," etc.
Lessor.. Mrs. Robert Hamilton.
Term expires.. Monthly.
Rent.. $335 per month, till new building is ready for occupation. Note—Between this and other premises rented from Mrs. Hamilton, rent for the two not to exceed $600 per month.
Lessor pays water and heating.

*No. 263.—Vancouver, B.C.*.. Ground floor of building 249 Hastings street.
Occupied by .. P.O. Station "B."
Lessor.. Mrs. Robt. Hamilton.
Time expires.. April 15, 1918 (lease No. 9542).
Rent.. $265 per month for first two years and $315 per month for the following three years.
Lessor pays taxes, water and heating.

*No. 264.—Vermilion, Alta.*.. .. .. .. .. .. .. .. .. Part of lessor's station grounds.
Occupied by .. .. .. .. .. .. .. Site for Immigration Hall.
Lessor.. .. .. .. .. .. .. .. .. Canadian Northern Railway Company.
Term expires.. .. .. .. .. .. .. On one month's notice from either lessor or lessee.
Rent.. .. .. .. .. .. .. .. .. .. $1 per annum.
Lessor pays taxes and water.

*No. 265.—Victoria, B.C.*.. .. .. .. .. .. .. .. .. Rooms 505, 506 and 507 on fifth floor of building at corners of Government, Humboldt and Gordon streets. Floor space, room 505, 306 square feet; floor space, room 506, 217 square feet; floor space, room 507, 306 square feet
Occupied by .. .. .. .. .. .. .. District Engineer.
Lessor.. .. .. .. .. .. .. .. .. The Belmont Buildings, Ltd.
Term expires.. .. .. .. .. .. .. July 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. $110 per month.
Lessors provide water and elevator service.
Rent payable at the office of Cross & Co., the duly appointed agents for the time being or at such other place in the city of Victoria as the landlords may designate.
Tenant to pay the landlords all charges in respect of water, gas, power or electric light used on the demised premises as indicated by the meter over and above the amount thereof to be supplied free of charge by the landlords as hereinafter mentioned.
Clause 3 sub-section (2) the landlord covenants to light the public halls, spaces and passages, to heat the premises and to furnish light and water for the tenants use and janitor service for the purpose of cleaning the premises, Provided: that the supply of electric light for the said demised premises free of charge shall be limited to not exceeding one candle power to every five square feet of floor space, and the tenant shall pay for all artificial light supplied beyond that extent at the rate generally charged therefor in Victoria aforesaid.
Clause 3 subsection (4) the landlords to supply the tenant with electricity for motive power to be used in running such machines as landlords may approve of in writing, such electricity to be paid for by the tenant at the rates generally therefor in Victoria.
Clause 2 subsection (11) provides that the tenant shall permit the janitor or other employees of the landlords to enter the premises for the purpose of cleaning same.
Clause 2 subsection (13) landlord not liable for damage from leaks.
Clause 2 subsection (14) binds the tenant not to use any electric current for lighting or motive purposes or any artificial lighting or motive power, except such as shall be supplied by the landlords meter laid by or on behalf of the landlords.
Clause 2 subsection (11) provides that the landlord or his agents may enter premises at any time to inspect or execute repairs.

*No. 266.—Victoria, B.C.*.. .. .. .. .. .. .. .. .. Room 504 on fifth floor of building at corners of Government, Humboldt and Gordon streets ,277 square feet.
Occupied by .. .. .. .. .. .. .. Engineers Public Works Department.
Lessor.. .. .. .. .. .. .. .. .. Belmont Buildings, Ltd.
Term expires.. .. .. .. .. .. .. September 1, 1916.
Rent.. .. .. .. .. .. .. .. .. .. $40 per month.
Lessors pays water and elevator service.
Rent payable at the office of Cross & Co., the duly appointed agents for the time being or at such other place in the city of Victoria as the landlords may designate.
Other clauses same as in above lease with Belmont Buildings, Ltd.

*No. 267.—Victoria, B.C.*.. .. .. .. .. .. .. .. .. Shelter in one of the freight sheds of C. P. Ry. Co.'s wharf for fumigating plant.
Lessor.. .. .. .. .. .. .. .. .. Canadian Pacific Railway.
Time expires.. .. .. .. .. .. .. Monthly.
Rent.. .. .. .. .. .. .. .. .. .. $2.50 per month.

*No. 268.—Victoria, B.C.*.. .. .. .. .. .. .. .. .. Three stores corner of Langley and Broughton streets, "Ames-Holding Building."
Occupied by.. .. .. .. .. .. .. Temporary Examining Warehouse.
Lessor.. .. .. .. .. .. .. .. .. Alexander James Cholan McDermott.
Term expires.. .. .. .. .. .. .. January 1, 1917.
Rent.. .. .. .. .. .. .. .. .. .. $500 per month.
Lessor pays taxes.
Lessee pays water.

No. 269.—*Victoriaville, Que.*.. .. .. .. .. .. .. Drain site.
Lessor.. .. .. .. .. .. .. .. .. Grand Trunk Railway Company.
Term expires.. .. .. .. .. .. Permission may be withdrawn at any time.
Rent.. .. .. .. .. .. .. .. .. $1 per annum.
Lessee pays taxes

No. 270.—*Viking, Man.*.. .. .. .. .. .. .. .. .. Site.
Occupied by.. .. .. .. .. .. Immigration Hall site.
Lessor.. .. .. .. .. .. .. .. Grand Trunk Pacific Development Co.
Term expires.. .. .. .. .. .. February 16, 1932.
Rent.. .. .. .. .. .. .. .. .. $1 per annum .

No. 271.—*Virden, Man.*.. .. .. .. .. .. .. .. .. School building.
Occupied by.. .. .. .. .. .. Immigration.
Lessor .. .. .. .. .. .. .. .. School District of Virden, Man.
Term expires.. .. .. .. .. .. March 15, 1916.
Rent.. .. .. .. .. .. .. .. .. $250 per anum.

No. 272.—*Wadena, Sask.*.. .. .. .. .. .. .. .. Lots 5 and 6, block 23, corner of Railway avenue and Third street, in townsite of Wadena.
Occupied by.. .. .. .. .. .. Immigration.
Lessor .. .. .. .. .. .. .. .. McKenzie, Mann Co., Ltd.
Term expires.. .. .. .. .. .. January 1, 1918. Lessee to vacate at any time on thirty days' notice and proportionate rental to be returned.
Rent.. .. .. .. .. .. .. .. .. $1 per annum.
Lessee pays taxes.

No. 273.—*Weymouth, N.S.*.. .. .. .. .. .. .. .. Building owned by lessor, west side of Main road and south side of Bridge.
Occupied by.. .. .. .. .. .. Post Office.
Lessor .. .. .. .. .. .. .. .. Thos. C. Rice.
Time expires.. .. .. .. .. .. June 1, 1916.
Rent.. .. .. .. .. .. .. .. .. $200 per annum, of which $100 is paid by Department and $100 by postmaster.
Lessor pays taxes, neat, light and cleaning.

No. 274.—*Wilkie, Sask.*.. .. .. .. .. .. .. .. Site for Immigration Hall.
Lessor.. .. .. .. .. .. .. .. .. Canadian Pacific Railway.
Term expires.. .. .. .. .. .. No lease filed with Department, but rent has been paid yearly in advance to 27th January, 1915.
Rent.. .. .. .. .. .. .. .. .. $1 per annum

No. 275.—*Windsor, N.S.*.. .. .. .. .. .. .. .. Rooms 1 and 2 on second floor Bank of Nova Scotia building, north side of Water street, with use of stairway or passage from Water street and use of closets and lavatories.
Occupied by.. .. .. .. .. .. Immigration.
Lessor.. .. .. .. .. .. .. .. Bank of Nova Scotia.
Term expires.. .. .. .. .. .. June 30, 1916.
Rent.. .. .. .. .. .. .. .. .. $225 per annum
Lessors pay taxes, heat and water.

No. 276.—*Windsor, Ont.*.. .. .. .. .. .. .. .. Part of lessor's building southeast corner of Ouelette avenue and London street.
Occupied by.. .. .. .. .. .. District Engineer, Public Works Department.
Lessor.. .. .. .. .. .. .. .. Heintzman Co.
Term expires.. .. .. .. .. .. October 2, 1919.
Rent.. .. .. .. .. .. .. .. .. $1,200 per annum.
Lessors pay taxes, water and heating.

No. 277.—*Winnipeg, Man.*.. .. .. .. .. .. .. .. Private line to Fire Hall, Immigration building, Winnipeg, in connection with Canadian May Oatway Fire Alarm, Ltd., fire alarm system: 1¼ miles at $7.50 per quarter mile.
Lessor.. .. .. .. .. .. .. .. Canadian May Oatway Fire Alarms Co., Ltd.
Rent.. .. .. .. .. .. .. .. .. $37.50.

No. 278.—*Winnipeg, Man.*.. .. .. .. .. .. .. .. Extra room in Bawlf building.
Occupied by.. .. .. .. .. .. Indian Affairs.
Lessor.. .. .. .. .. .. .. .. N. Bawlf estate.
Term expires.. .. .. .. .. .. Monthly at end of each month.
Rent.. .. .. .. .. .. .. .. .. $35 per month.

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*No. 279.—Winnipeg, Man.*.. Offices on third floor and small storeroom on second floor, Chamber of Commerce building.
Occupied by.. Hydrographic Survey.
Lessor.. N. Bawlf estate.
Term expires.. December 1, 1918, with privilege to lessee to terminate lease at end of third year (December 1, 1913) or fourth year (December 1,1917) on three months' notice in writing prior to end of third or fourth year.
Rent.. $225 per month.
Lessor pays all taxes, water, heating, light, insurance, cleaning and elevator service.

*No. 280.—Winnipeg, Man.*.. Two rooms in Chamber of Commerce building
Occupied by.. Gas and Electricity.
Lessor.. N. Bawlf estate.
Term expires.. At any time on thirty days' notice.
Rent.. $70 per month.

*No. 281.—Winnipeg, Man.*.. Seven rooms Nos. 400, 402 404, 240, 210, 208 and 214 in old Grain Exchange building.
Occupied by.. Indians Affairs.
Lessor.. N. Bawlf, estate of.
Term expires.. On one month's notice from first of month in any month.
Rent.. $90 per month.
Lessor pays heat and sweeping.

*No. 282.—Winnipeg, Man.*.. Office No. 406 at lessor's building, corner Portage avenue and Edmonton street.
Occupied by.. A chives.
Lessor.. Wm. James Boyd.
Term expires.. March 31, 1916.
Rent.. $47.50 per month.
Lessor pays all taxes, water, heat, janitor and cleaning.
Lessee pays lighting.

*No. 283.—Winnipeg, Man.*.. Office (15 by 16 feet, equals 240 square feet) in Boyd building.
Occupied by.. Inspector of Fisheries.
Lessor.. W. J. Boyd.
Term expires.. Month to month at end of each month.
Rent.. $27 per month.

*No. 284.—Winnipeg, Man.*.. Second floor of Boyd building, corner of Edmonton and Portage avenue. Floor area, 1,467 square feet.
Occupied by.. Railway Commission.
Lessor.. Wm. J. Boyd.
Term expires.. June 1, 1916.
Rent.. $1,830 per annum.
Lessor pays taxes, water, heating and power.
Lessee pays for lighting.

*No. 285.—Winnipeg, Man.*.. Room in lessor's Dominion Express Co. building.
Occupied by.. Post Office Station "A."
Lessor.. Canadian Pacific Railway.
Term expires.. July 11, 1916, but may be ended any time by the lessor on one month's notice in writing to lessee.
Rent.. $2,992.66 per annum.
Lessor pays heating and lighting.
Lessee pays taxes.

*No. 286.—Winnipeg, Man.*.. That messuage and tenement, southwest corner Portage avenue and Aubrey street, being two stores west of corner store in said building.
Occupied by.. Post Office Station "D."
Lessor.. C. W. Cooper and W. A. Cooper.
Term expires.. March 31, 1915.
Rent.. $1,800 per annum.
Lessee pays business taxes, water, heat, light.

No. 287.—*Winnipeg, Man.*.. .. .. .. .. .. .. .. Rooms 701, 702, 703 and 704, Notre Dame building.
Occupied by.. .. .. .. .. .. .. District Engineer and Staff.
Lessor.. .. .. .. .. .. .. .. .. Notre Dame Investment Co., Ltd.
Term expires.. .. .. .. .. .. .. January 1, 1920.
Rent.. .. .. .. .. .. .. .. .. .. $1,500 per annum.
Lessors pay taxes, water, heating and janitor service and provide elevator service.

No. 288.—*Winnipeg, Man.*.. .. .. .. .. .. .. .. All that messuage and tenement known as 103 Osborne street, "Adelaide Block."
Occupied by.. .. .. .. .. .. .. Post Office Station "C."
Lessor.. .. .. .. .. .. .. .. .. Sir R. P. Roblin.
Term expires.. .. .. .. .. .. .. February 1, 1915.
Rent.. .. .. .. .. .. .. .. .. .. $1,500 per annum.
Lessor pays heating.

No. 289.—*Winnipeg, Man.*.. .. .. .. .. .. .. .. Room 28 by 75 feet in the basement of Union Station.
Occupied by.. .. .. .. .. .. .. Postal purposes.
Lessor.. .. .. .. .. .. .. .. .. Winnipeg Joint Terminals.
Term expires.. .. .. .. .. .. .. September 1, 1917, with option of renewal of a further term of five years on same conditions.
Rent.. .. .. .. .. .. .. .. .. .. $2,416 per annum.
Lessors pay taxes, heating and lighting.

# PART IV

# CHIEF ENGINEER'S REPORT

ON

# HARBOUR AND RIVER WORKS

INCLUSIVE OF

GRAVING DOCKS AND DREDGING OPERATIONS; ALSO ROADS, BRIDGES AND SURVEYS THROUGHOUT THE DOMINION

# REPORT OF THE CHIEF ENGINEER.

Department of Public Works of Canada,
Chief Engineer's Office,
Ottawa, August 12, 1915.

R. C. Desrochers, Esq.,
Secretary,
Department of Public Works.

Sir,—I have the honour to submit the annual report on the various works under my charge during the fiscal year ended March 31, 1915.

These works comprise the construction and repair of wharves, piers, breakwaters, dams, weirs, bank and beach protection works; the improvement of harbours and rivers by dredging; the construction, maintenance, and operation of Government dredging plant; the construction and maintenance of graving docks; the construction, maintenance and working of slides and booms; the construction and maintenance of interprovincial bridges and approaches thereto, and of bridges on highways of Federal importance in the Northwest Territories, and the maintenance of military roads; also hydrographic and ordinary surveys and examinations, inclusive of precision levelling and geodetic measurements which are required for the preparation of plans, reports, and estimates; the testing of cements, etc.

I have the honour to be, sir,
Your obedient servant,

EUG. D. LAFLEUR,
*Chief Engineer.*

## PROVINCE OF NOVA SCOTIA.

### AMHERST.

Amherst harbour, Cumberland county, is situated at the head of Chignecto bay, near the mouth of the Laplanche river, about 2½ miles from Amherst town. The town of Amherst is probably the most important, prosperous, and thriving industrial town in the province of Nova Scotia. It is a manufacturing centre of considerable magnitude, and efficient water transportation would consequently augment its future advancement. Its population is in the vicinity of 11,500.

This work is described in report of 1914.

In 1913-14, about $3,000 was expended in removing the old wharf, and during the past fiscal year, an extension to the new wharf was constructed. This extension is 250 feet in length, of similar construction to the second wharf, namely, pile trestle bents situated 8 feet apart, with the piles located 7½ feet from each other laterally.

the front being close piled and double fendered. This work was let by contract to the Maple Leaf Lumber Company, Limited, of Amherst. The work was commenced in June, and completed November 10, 1914. The amount of the contract was $16,440; with extras amounting to $584.16.

Tides rise here, spring 40 feet, neap 33 feet.

*Dredging.*

During the past fiscal year, dredge *No. 14* was engaged in this work. Dredging commenced on June 27, and was suspended on November 17, 1914, during which time 9,953 cubic yards of material were removed, of which 1,333 yards were taken from the berths along the public wharf, and the remainder from a point opposite the marine railway dock.

When the work was closed down, there had been removed a triangular area with a base 580 feet long, and a perpendicular 90 feet in length. There still remains a trapezoidal formed area 80 feet perpendicular length, 680 feet base and 580 feet top. The quantities given herein are scow measurement, and the material removed is clay, the top 4 feet of which is fairly easy to remove but beyond that depth it becomes quite hard.

ANDERSON'S COVE.

Anderson's cove, Annapolis county, is a very slight indentation in the coast line, on the south side of the Bay of Fundy, 15 miles east of Digby Gut, 2 miles east of Litchfield and 5 miles west of Parker's cove. The settlement, which is called Hillsburn, comprises, within a radius of a mile, about 150 people, dependent almost exclusively on the fisheries for a living.

In order to afford some measure of protection and shelter for the fishing boats, which are often broken or destroyed for lack of shelter, the Department in 1905-06 began the construction of a breakwater, which was extended in 1906-07, in 1908-09, 1909-10, 1911-12, and again in 1912-13.

In 1912-13, the sum of $2,999.59, was expended in completing the extension, 42 feet long, built in 1911-12, and in the construction of a further extension, 60 feet long, 26 feet wide and from 20 to 25 feet high.

In 1913-14, the sum of $3,000 was expended in building 264 running feet of break on the seaward side of the breakwater, and sheathing the same distance. A hole underneath the middle of the length of the work, which was made by a severe storm in January, 1913, was filled with timber, brush and stone.

The whole breakwater is now 414 feet long, 26 feet wide and from 7 to 25 feet high, substantially built of native timber crib-work, full fendered and ballasted. Spring tides rise about 28 feet.

In 1914-15, the sum of $193.50 was expended in placing about 400 cubic yards of heavy riprap along the seaward face of the breakwater and in a few emergent repairs to the floor.

ARICHAT.

Arichat, the shiretown of Richmond county, is situated on the northern shore of Arichat harbour, on the southern side of Madame island.

The harbour, which is spacious, is well sheltered by outlying islands and has two entrances, of which the western, although only about 600 feet in width, is the easiest to make; the southern entrance is about 1,800 feet wide, but it lies between shoals.

On July 13, 1910, a contract was entered into for the construction of a wharf and warehouse thereon, for the sum of $16,176. The work of construction was commenced on September 23, 1910, and was completed on September 8, 1911.

The work consists of a stone approach 131 feet long and 30 feet wide; of a block and span wharf 144 feet long and 30 feet wide with an "L" also consisting of

a block and span work, 90 feet long and 50 feet wide, and of a warehouse 80 feet long and 25 feet wide placed on the "L." The channel face of the wharf has a length of 120 feet with a depth of 19 feet at low water, and the blocks, which consist of round timber cribwork, have creosoted timber substructure.

During 1912-13, the sum of $589.59 was expended in procuring all the necessary materials for a stone and concrete retaining wall in front of the Government property, and in the construction of 40 lineal feet of it, and during 1913-14, the sum of $293.49 has been expended by day labour in the construction of a further length of 40 lineal feet of work.

During the fiscal year ended March 31, 1915, the sum of $100 was expended in the construction and placing of a crane, a movable platform, an additional mooring post, in procuring two trucks and in placing gravel in the approach.

ARISAIG.

Arisaig, Antigonish county, is on the southeastern shore of Northumberland strait, about 15 miles southwest from Cape George.

The works at this place include a pier on the northern and a breakwater on the southern side of a small cove.

The pier, commenced by the Provincial Government prior to Confederation and extended and improved by the Department, is 544 feet in length, including an approach 272 feet in length, and from 40 to 44 feet in width, strengthened and protected on the seaward side by a 24 by 24 foot crib-work block at the outer end, and by a quarried stone sloping 3 to 1, from high water level.

In 1910-11, the sum of $4,761.32 was expended in repairing about 60 feet of the roadway and about 80 feet of the seaward face of the wharf; also in reballasting and repairing the "L" at outer end of work and in procuring all the creosoted timber and part of the ballast and native timber for a proposed extension which is to be 57 by 20 feet in line of work, extending to 12 feet at L.W.S.T. with creosoted substructure to half tide, fully ballasted and sheathed on all faces with creosoted and hardwood sheathing. Depth at outer end of present work 4 feet. Spring tides rise 5 feet.

In 1911-12, the sum of $15.32 was expended in paying balance due on creosoted timber and in procuring the balance of materials required for the proposed extension.

In 1912-13, the sum of $1,565.74 was expended in cutting down to low water and reconstructing with creosoted timber substructure, a portion of the outer face of the pier, 80 feet in length, (24 to 104 feet from outer end), 20 feet in width and 10 feet in average height.

In 1913-14, the sum of $2,234.90 was expended as follows: $1,165.36 in strengthening the outer end of the pier and in general repairs, and $1,029.54 in procuring part of the ballast and native timber required for a proposed extension.

During the fiscal year 1914-15, the sum of $2,833.27 was expended in completing repairs to outer end of pier; the removal of ballast, etc., by a diver over the site of the proposed extension; in purchasing the balance of materials required for the proposed extension, and in the construction of a small shed for storing tools and material.

Work was in progress in May, July, August, September and October.

BABIN'S COVE.

Babin's Cove, Richmond county, is on the northern shore of Arichat harbour, Madame island and nearly opposite its western entrance.

The wharf, built by the Department during 1893-4, is 72½ feet in length extending to 13 feet at low water and was intended as a winter landing for the steamers plying daily between Port Mulgrave and Arichat, when they could not reach the inner harbour on account of ice.

The work consists of a stone embankment 12 feet in length; a block and span structure made of an inner block 20 by 20 feet on top, and an outer block 25 by 40 feet on top with an opening 17½ feet between them.

Although built over 20 years ago, up to this year the work has not required any repairs, but as the timber above low water became decayed and the top worn, during the present year, the sum of $1,398.46 was expended in the reconstruction of all the timber work above low water, consisting of ordinary cribwork and renewal of all floor-stringers, covering, capping and fenders.

BADDECK.

Baddeck, the shiretown of Victoria county, is on the northern shore of the Little Bras d'Or lake, near the entrance to St. Patrick's channel.

During 1907-8, a wharf 284 feet in length and extending to 18 feet at low lake level, was constructed by the Department. It consists of a road approach 64 feet in length and 30 feet in width, of cribwork with creosoted timber substructure, 50 feet in length and 48 feet wide, of a creosoted timber pile extension 170 feet long and 40 feet wide with two boat landing stages respectively 32 and 64 feet in length and 8 feet wide one on either side of the inner end of the wharf and built on creosoted timber pile foundation.

The top of the wharf is 5 feet above low level of the lake, which rises about 15 inches.

During 1908-9-10, the wharf property was fenced in, drained, raised and levelled; the old warehouse was repaired and fitted up for office, waiting-room and baggage-room; a new freight warehouse 48 by 24 feet wide was constructed on the inner end of the wharf, and a cribwork retaining wall was partly built on the harbour front of the property. During the year 1912-13, the sum of $399.97 was expended by day labour in the completion of the cribwork, wharfing and retaining wall and in painting the fencing around the property.

During the year ended March 31, 1914, the sum of $59.18 was expended in temporary repairs to the covering of the wharf.

During the year 1914-15, the sum of $624.86 was expended in the renewal of plank covering on the outer end of the wharf and in close-sheathing the outer face of the cribwork block on the eastern side of the wharf.

BARACHOIS.

Barachois, Victoria county, is a small settlement at the mouth of the Barachois river, on the northern side of St. Ann's bay, about 3 miles to the eastward of the entrance into St. Ann's harbour.

The mouth of the river forms a small boat harbour, protected by an outlying beach, and is connected with the bay by the shifting channel through the gravel bar.

For the purpose of preventing the mouth of the channel from sanding up from the eastward, a breakwater 232 feet in length, consisting of cribwork, was constructed on the eastern side of the entrance; in order to confine the river's channel and secure a greater depth of water over the bar outside, a training pier consisting of piles, brush and stone, 230 feet in length, was constructed on the eastern side of the entrance, 200 feet from and parallel to the breakwater.

By the construction of these works, the channel was very much improved, and for the purpose of rendering the works still more effective, during 1910-11, the sum of $797.72 was expended in extending the training pier a distance of 80 feet with round timber cribwork.

During the year ended March 31, 1915, the sum of $699.96 was expended in repairs to the training pier, consisting of filling in with brush and stone and in raising the cribwork block at its outer end, a height of 2 feet.

This work has proved very successful, in keeping the mouth of the channel clear of sand, and the harbour can now be entered by boats at all times of tide.

BASS RIVER.

Bass River, Colchester county, is a farming and manufacturing village of about 500 people, situated at the north side of Cobequid bay, the eastern arm of the Bay of Fundy. It is half way between Truro and Guysboro, or about 28 miles from either place.

In 1894-95, the Department built by contract, at a cost of $3,240, a public wharf of pilework, 210 feet long, 40 wide with an ell at the outer end 50 feet long and 40 wide. At the outer end of the ell, it was found necessary to build a small block of cribwork, containing 8,000 cubic feet, on account of the hard nature of the bottom preventing piles being driven to a proper depth. Along the outer face the work is 25 feet high, giving a depth at H.W.O.S.T. of 22 feet.

In the fiscal year 1901-02, the Department expended the sum of $1,099.11 in extending the pilework. The extension is 40 feet square, substantially built of pilework and giving the wharf the shape of the letter "T." A small freight shed was also constructed for the accommodation of shippers and merchandise. Since this date, various sums have been expended in repairs to the work; and in the year 1911-12, $709.33 was expended in repairs and renewals to the flooring of the work, the whole of the planking, stringers, and some of the caps being renewed.

During the fiscal year 1914-15, the sum of $534.89 was expended in doing some work to the approach, placing some new fenders, repairing the outer corner of the wharf and placing some new brace piles and replanking a portion of the ell.
Work commenced May 1, and was completed December 5, 1914.

BATTERY POINT.

Battery Point, Annapolis county, is a fishing settlement of about 150 people, situated on the east side of Digby Gut, about 4 miles northeast from the town of Digby, and 16 miles southwest from the town of Annapolis.

In 1904-05, the Department began the construction of a breakwater, for the protection of the fishing fleet, comprising some 40 or 50 boats. The work was extended in 1905-06, 1906-07 and in 1910-11, and is now 190 feet long, from 8 to 29 feet high and 26 to 30 feet wide, substantially built of native timber crib-work, filled with ballast, and with the lower portion protected by 4-inch creosoted sheathing, as a protection against the limnoria.

In 1911-12, the Department, under an expenditure of $2,709.87, began the construction of a second breakwater, a couple of hundred feet to the south of the existing work, for the purpose of affording shelter from southerly weather.

In 1912-13, the sum of $2,598.89 was expended in extending the south breakwater by an additional block, 70 feet long, 30 feet wide and from 22 to 29 feet high.

In 1913-14, the sum of $625.98 was expended in completing the work. Spring tides rise 27 feet, neaps 23 feet.

In 1914-15, the sum of $5,250 was expended in building a further extension to the south breakwater. The new block is 70 feet long, 30 feet wide and from 29 to 32 feet high. The work was built by contract. Work was begun early in May, 1914, and was not finished until the end of January, 1915.

The sum of $374.24 was also expended in building, by day labour, a freight shed, 30 feet long by 13 feet wide, on the north breakwater.

The sum of $299.25 was expended in excavating, by hand digging, and removing by horses and carts, a quantity of gravel and sand that obstructed the berth for fishing boats, between the north and south breakwater.

BAYFIELD.

Bayfield, Antigonish county, is on the southern shore of St. George's bay, 15 miles to the westward of the northern entrance to the Strait of Canso.

In 1892-93, a contract was entered into for the construction of a new wharf. The work under contract was completed, and the approach to it was improved by one of the departmental dredges, in 1893-94.

The new wharf is 442 feet in length, including 33 feet of rubble masonry, 319 feet of block and span open-faced crib-work, 25 feet wide, and 90 feet of close-faced crib-work in two blocks each 60 by 30 feet, placed at right angles. The substructure of the open-faced cribwork and of the outer close-faced cribwork is of creosoted timber. The depth at extreme low water at the outer end is 10 feet. Spring tides rise 4 feet.

Since its completion, the blocks of both open and close-faced work have settled considerably, principally on the northern side.

In May and June, 1896, the sum of $348.37 was expended in levelling up 127 feet of the block and span work and in slight repairs to the covering between the outer close-faced blocks.

In 1903-04, the sum of $3,074.57 was expended in raising and repairing the outer end and in renewing the stringers, covering and cap-timbers over the whole structure.

In 1913-14, the sum of $2,500.37 was expended in replacing worm eaten timber in the substructure of the outer block and in some of the blocks of the approach and in the renewal of the floor stringers, covering, guard-rails, upper face-timbers and ties to within 142 feet of the inner end.

During the fiscal year 1914-15, the sum of $963 was expended in the removal and reconstruction of the abutments and block at inner end of wharf, including three tiers of round native timber, new stringers, covering and guard rails from the inner end outwards, a distance of 125 feet. A balance of $180, after completion of repairs was expended in replacing and concreting part of stone covering at outer end of breakwater.

Work was in progress in September, October and November, 1914.

BEAR COVE.

Bear Cove, Digby county, is a slight indentation in the coast of St. Mary's Bay, Bay of Fundy, 23 miles north of Yarmouth and equidistant from Cape Cove on the south and Meteghan on the north, being about 5 miles from each. The population of the settlement, within a radius of a mile, comprises a couple of hundred people, chiefly dependent on fishing for a living.

In 1906-07, the Department built a breakwater, by contract, at a cost of $5,748.92, and it has since had some four or five expenditures for repairs and improvements, of which full particulars will be found in the departmental report for 1913-14.

In 1914-15, the sum of $3,291.09 was expended in building an extension to the breakwater, 60 feet long, 28 feet wide and from 22 to 28 feet high. The block is of the usual type of round log cribwork, filled with ballast, provided with a break on the seaward side, and damage done to the upper part of the work by a recent storm, was repaired.

BEAR COVE.

Bear Cove is situated on the west side of Halifax harbour, 11 miles from the city. It is a small fishing centre with a population of about 50, and has a post office, school and direct telephone communication with Halifax. The principal industries of the place are market gardening and fishing. It has one of the roughest shores in Halifax bay.

During the fiscal year 1914-15, the sum of $1,699.35 was expended in the building of a skidway for boats. The work is 120 feet long by 30 wide, and was carried out by blasting a ledge of rock on the shore so as to give the required slope to the bed, and by placing on this 8 by 8 inch ties overlaid with 6 by 6 inch stringers, on top of which cross pieces 5 by 5 are spiked to haul the boats on.

This work will be a great convenience to the fishermen as it will provide a safe landing for boats.

Work commenced July 27 and completed December 24, 1914.

BEAVER HARBOUR.

Beaver Harbour, Halifax county, is a lumbering, fishing and farming district with a population of from 300 to 400 people, situated about 60 miles east of Halifax on the Atlantic coast.

In the fiscal year 1913-14, the sum of $2,137.69 was expended in the construction of an approach for a proposed pilework wharf and in the purchase of timber in readiness for the construction. The approach was built 72 feet in length by 20 in width, with an average height of 6½ feet.

During the fiscal year 1914-15, $2,727.80 was the expenditure in completing the work and building a shed. The wharf is of solid native timber cribwork of block and span construction. The completed work measures 204 feet in length by 20 in width, with an ell 20 by 22 feet giving a face length of 42 feet and a depth of water at low tide along the face of the work of about 12 feet.

Work was started September 1, and completed March 30, 1915.

BELLIVEAUS COVE.

Belliveaus Cove, Digby county, is situated on the eastern shore of St. Mary's bay, Bay of Fundy, 4 miles south-west from Weymouth. It has a population of about 300, engaged in fishing, farming, and general trade. The harbour, which is dry at low water (spring tides rise 20 feet) is formed by two piers or breakwaters, the northern built in 1825 and the southern in 1853, both at the joint expense of the inhabitants and the Provincial Government. The protected area is about 3 acres in extent, over the greater part of which is a depth of 12 to 14 feet of water at H.W.O.S.T.

Since 1878, the Department has made numerous small expenditures in repairs, renewals and extensions to both breakwaters, of which a full account will be found in the departmental report for 1908-09.

In 1912-13, the Department expended the sum of $1,700 in deepening the berth alongside the breakwaters, by means of hand digging; the material, sand, gravel and mud, being removed in carts.

In 1914-15, the sum of $4,911.30 was expended in building an extension to the south breakwater-wharf, 115 feet long, 33 feet wide and from 18 to 21 feet high, of substantial crib-work. Extensive repairs were also made to both the south and the north works.

BIG HARBOUR.

Big Harbour, or Port Bevis, Victoria county, is on the northern side of the Great Bras d'Or channel, about 15 miles to the westward of its entrance into the Atlantic.

During 1904-5, a block and span wharf, with creosoted timber substructure, extending to 13 feet at low water, 81 feet long and 20 feet wide with an "L" on the eastern side of its outer end, 20 by 20 feet, was constructed and was connected with the public road by a road approach, 113 feet in length including a small bridge over a small brook, and during 1910-11, a small freight shed was constructed on the "L."

During 1914-15, the sum of $39.97 was expended in repairs to the small bridge on the road leading to the wharf.

BLACK POINT.

Black Point, Shelburne county, is situated about 17 miles southwest of Shelburne, and 15 miles east of Barrington. It has a population of about 500, the chief pursuits of the people being fishing and farming. In the year 1900-01, in order to afford adequate facilities to these people for landing freight, which formerly they had to boat from a distance of five miles, the department constructed a combined cribwork and pile wharf at a cost $2,000. During the past fiscal year, $1,380.94 was expended in rebuilding a portion of this wharf, and effecting the necessary repairs. The work was commenced on October 1, and completed on December 31, 1914. The wharf consists of, first, an approach constructed in the form of a rock bank 47 feet long, 24 feet wide on top, with a height of 8 feet at the outer end; secondly, two blocks of stone-filled, open-faced log cribwork, each 20 feet long, separated by a span 13 feet in length; thirdly, 120 feet in length of pile trestle work. The main wharf is 22 feet wide, with the exception of the outer 20 feet, which has a width of 42 feet over all, and has a depth of about 11 feet at its outer end at L.W.O.S.T. The pile trestle work, 120 feet in length, consists of 12 pile trestle bents, separated centre to centre of pile heads, 10 feet. These bents were thoroughly braced, waled and fendered.

The work done consisted of renewing the entire top of the wharf, that is, the planking, guard rail, exterior and interior stringers. Besides this, the top two tiers of logs in the crib-work, one-third of the bearing piles, the trestle bents and three-quarters of the fender piles, were renewed.

Spring tides rise 7 feet, neap 5 feet.

BLANDFORD.

Blandford, Lunenburg county, is a fishing and farming settlement in Chester bay, ten miles from East River station on the H. & S. W. Railway and 17 miles from Hubbards. Contains three stores and two churches and has a population of about 350, principally engaged in fishing.

During the fiscal year 1914-15, the sum of $15,043.02 was expended under contract with Messrs. C. A. Strum & Son, in the construction of a breakwater of solid native timber cribwork, 500 feet in length and 20 in width, with a batter of 1 and 12 on the seaward side. There is also an ell at right angles to the main part of the work, which is 25 by 30 feet. The seaward side is close sheathed and on this side there is a timber break 4 feet in height. The average height is 21 feet and depth at low water at the outer end is 16 feet.

Work started early in April and completed in December, 1914.

BLUFF HEAD.

Bluff Head, Yarmouth county, is a small fishing and farming settlement of a couple of hundred people, situated on the coast of the mouth of the Bay of Fundy, about 5 miles from Yarmouth and about midway between Cheggogin Point on the south and Sandford on the north, or about one and a half miles from each.

In 1908-09, the sum of $2,005.17 was expended in constructing a small breakwater for the protection of the fishing fleet. The work is 130 feet long, 20 feet wide and from 4 to 9 feet high, substantially built of round cribwork, filled with ballast and protected with a break, 4 feet high, on the seaward face.

Spring tides rise about 18 feet.

Since 1909, the breakwater has been twice extended. Full particulars will be found in the annual report for 1913-14.

In 1914-15, the sum of $199.29 was expended in building a piece of crib-work, 65 feet long, 10 feet wide and 7 feet high, eastwards or shorewards from the shore end

of the breakwater, to protect the bank which was wearing away by undertow from seas working around the end of the breakwater.

The sum of $3,001.77 was expended in extending the breakwater by a new block, 50 feet long, 30 feet wide and from 18 to 21 feet high, of substantial cribwork.

BOULARDARIE.

Boulardarie Centre, Victoria county, is on the southern side of the Great Bras d'Or channel, about 8 miles to the westward of the entrance into the Atlantic ocean and 10 miles to the eastward of its entrance into the Little Bras d'Or lake.

On April 25, 1901, a contract was entered into for the construction of a wharf which was completed on June 30, 1902.

The wharf is 164 feet long and 20 feet wide with an "L" at the outer end 20 feet by 20 feet and consists of an approach of stone, clay and gravel, 10 feet long; of a cribwork abutment 30 feet long; of two cribwork blocks 20 feet, and of an outer block 24 feet by 40 feet with 20-foot openings between the blocks, spanned and covered over. The abutment and the blocks constructed of round timber are creosoted up to the level of high water, fully ballasted and fendered and the two outer blocks are protected by close-sheathing.

The depth of the channel face of the wharf at low water is 13 feet.

Spring tides rise 2 feet.

During 1902-03, a road 2,100 feet in length was constructed from the wharf to the main road, and during 1904-05, a post and wire fence was constructed on each side of the road.

During 1913-14, the sum of $74.50 was expended in urgent repairs to the covering of the wharf, and during 1914-15, the sum of $22 was expended in the purchase of drain pipe to be placed in brook underneath the bridge on the road leading to the wharf.

BRIGHTON.

Brighton, Digby county, is a farming and fishing settlement of about 300 people, situated at the extreme head of St. Mary's bay, Bay of Fundy, 7 miles southwest from the county town of Digby.

In 1914-15, for the convenience of local trade and shipping, the department built a public wharf at a cost, by day labour, of $4,228.87, including the fencing of the property, but not its purchase, which amounted to $200. The work, which is built of ordinary round log cribwork, is 150 feet long, from 20 to 30 feet wide and from 5 to 15 feet high. The work was begun early in July, and finished at the end of December, 1914.

BURYING ISLAND.

The harbour of Canso, Guysborough county, on the Atlantic coast near the eastern extremity of Nova Scotia proper, is formed by Piscatiqui, George and Grassy islands on the east, and by Durell island and the mainland on the west; Cutler island and shoals between it and Durell island protect it from the north and Burying island and the bar between it and Lanigan Point from the southeast.

The clay banks on Burying island had been gradually washing away until only a small portion of it remained above high water. Its destruction would have transformed it into a dangerous reef and left the harbour exposed to the swell from the Atlantic Ocean. It became necessary therefore to protect the remains of the island by a breakwater. This work, begun in 1880 and finished in 1882, is 290 feet long and 21 feet

wide, constructed of strongly framed cribwork fully ballasted and covered with large stones with sloping spurs at the ends on the seaward side 18 feet in length and 16 feet in width, originally covered with 3-inch plank.

In 1900-01, the sum of $34.60 was expended in replacing part of the covering of the spur at the northern end of the breakwater.

In 1912-13, the sum of $50 was expended in renewing the covering of the spur at the western end of the breakwater with concrete.

During the year 1914-15, the sum of $91.71 was expended in replacing covering of northern spur of breakwater with concrete and in replacing fenders on seaward face between spurs.

Work was in progress in October.

### CALDWELL'S COVE.

Caldwell's Cove, Digby county, is a small fishing and farming settlement on the shore of the Bay of Fundy, 5 miles southwest from Digby Gut and 5 miles northwest from the town of Digby, and 2 miles southwest from Culloden, where the Department also built a breakwater a few years ago.

In 1914-15, for the protection of the fishing fleet, the department expended the sum of $6,900, in building a breakwater by contract. The work, which is of the usual type of round log cribwork, provided with an inclined slip on the inner and a break on the outer or seaward face, is 203 feet long, from 20 to 30 feet wide and from 5 to 22 feet high. Contractors, Landry and Whidden. The work was begun on the 2nd of June and finished on the 2nd of September, 1914.

### CANNING.

Canning, Kings county, is a prosperous village of about 1,500 people, mostly engaged in farming and fruit raising, situate on the north bank of the Habitant river, which, 2½ miles below, debouches into the Basin of Minas. It is an important station on the Kingsport branch of the Dominion Atlantic railway, which connects with the main line at Kentville, 11 miles to the south.

The construction of a cribwork wharf was begun by the department in 1904-05, and completed in 1907. (Full details will be found in the departmental report for 1909-10).

In 1910-11-12, the sum of $3,478.50 was expended in extending the wharf down stream, the extension being 590 feet long from 10 to 20 feet wide and from 8 to 20 feet high.

In 1914-15, the sum of $1,999.18 was expended in building a piece of cribwork, 215 feet long, 10 feet wide and 8 feet high, on the east side of the river, to act as a shear dam for the purpose of scouring away the deposits of mud in the channel.

### CAPE ROUGE.

Cape Rouge, Inverness county, is a small fishing station on the Gulf of St. Lawrence, about 8 miles to the northward of the entrance to Cheticamp Harbour.

On August 30, 1911, a contract was entered into in the sum of $15,884, for the construction of a breakwater to serve as a landing place and a shelter for fishing boats. The work of construction was commenced May 13, 1912, and was completed January 17, 1913.

The work is 250 feet long and 20 feet wide on top, with a "T" head 20 feet wide in line of work and 105 feet long, and consists of continuous round timber cribwork with creosoted timber substructure, fully ballasted and close-sheathed on the outer faces.

The depth of water along the channel face of the "T" head is 7½ feet at low water springs, which rise 4 feet.

During 1914-15, the sum of $40 was expended by day labour in replacing some 35 cubic yards of ballast in the work where it had settled.

### CHEGGOGIN.

Chegoggin, Yarmouth county, is a small fishing and farming village with a population of 200, situated on the Bay of Fundy coast, six miles north of Yarmouth. The little bay, of the same name, is about a third of a mile deep north and south by about the same east and west, fully exposed to the southwest, but well sheltered from other quarters. It is dry at low tide, but at high water it has from 12 to 14 feet of water.

Over a half a century ago, a breakwater was built by the inhabitants, but it was totally destroyed some twenty years ago, not a vestige of it being now visible.

In 1905-6, the inhabitants, with the aid of a grant of $45 from the municipality, built a small breakwater, 80 feet long, 12½ feet wide and from 6 to 11 feet high, on the south side of the stream outlet. Since the above date, numerous expenditures were made by the department in repairs, renewals and extensions, of which a full account will be found in the departmental reports for 1905-06 and 1911-12.

In 1912-13, the sum of $984.05 was expended in building a small piece of cribwork as a breakwater on the north side of the stream. The work was 100 feet long, 11 feet wide and 6 to 8 feet high. The stream that issues alongside the breakwater was also deepened, by hand digging and horse scrapers, for a length of 300 feet, 15 feet wide and from 1 foot to 4 feet in depth.

In 1914-15, the sum of $2,698.65 was expended in extending the north groyne, or breakwater, shorewards by a new block, 90 feet long, 12 feet wide and 7 feet high. The outer end also was extended 100 feet by a block 11 feet wide and 9 feet high. The central part of the work between the two extensions was also raised one log high and repaired.

### CHRIS COVE.

Chris cove, Annapolis county, is a settlement of about 100 people (within a radius of a mile), engaged in fishing and farming, on the coast of the Bay of Fundy, and midway between Leonard's Cove and Young's Cove, being 2 miles northwest of the former and an equal distance southwest from the latter.

In 1914-15, the sum of $2,992.25 was expended in the construction of a small breakwater, 130 feet long, 25 feet wide and of an average height of 15 feet, substantially built of the ordinary type of cribwork. The work is not quite finished.

### COMEAUS COVE.

Comeaus Cove, Digby county, is a fishing and farming settlement of about 100 people, situated on the shore of the mouth of St. Mary's bay, Bay of Fundy, about 1½ miles south of Meteghan.

In 1914-15, for the protection of the fishing fleet, the department built a breakwater, by contract. The work, which is built of substantial cribwork, the outer end and sides being protected by creosoted sheathing, is 173 feet long, 30 feet wide and from 12 to 30 feet high. Contractors, Denton and Cenden, and the amount of contract was $11,890. The contractors also built a road approach, consisting of cribwork and stone, 320 feet long, 18 feet wide and from 5 to 14 feet high, at a cost of $3,270.17. Work was begun about the 1st of June, and completed on the 19th of November, 1914.

The sum of $289.51 was also expended in emergent repairs to the work, necessitated by serious damage sustained in an exceptionally heavy storm on the 15th of December, 1914.

COMEAUS HILL.

Comeaus Hill, Yarmouth county, is the name of a straggling settlement of some two or three hundred people, situated on the west side of and close to, the extremity of the peninsula between Chebogue harbour and Goose bay, about fifteen miles south-west from Yarmouth, the county town. It is conveniently situated, as regards the fishing industry of a considerable district, and is the headquarters of a fleet of some forty boats.

In 1900-01, the department expended the sum of $1,000 in building a breakwater, 135 feet long, 16 to 20 feet wide on top, and 12 feet high at the outer end. The whole work is constructed of granite boulders, the inner or harbour face being of split boulders laid with a smooth battered face of about 1 to 12, the outer or seaward face of round and irregular shaped rocks with a slope of 1½ to 2 in 1. The work so far as it goes, answers its purpose admirably, and is a permanent and satisfactory job.

In 1902-3, the sum of $599.72 was expended in partially rebuilding the outer 50 feet in length of the breakwater, which had been damaged by an abnormally high tide and a northwest gale on November 24, 1901.

Spring tides rise 12 feet, neaps 10 feet.

On the 3rd of April, 1914, a contract was signed by John D. Potier of Belleville, Yarmouth county, for the construction of an extension to the breakwater, by a substantial block of stone-filled cribwork, 100 feet long, 30 feet wide and from 16 to 18 feet high. The contract also included repairs to the outer end of the existing stone breakwater to make proper connection with the new extension.

Work was begun about the middle of August, 1914, and carried on without much vigour until the 18th of December, when it was suspended, owing, as the contractor alleged, to conditions of ice and weather. At the end of the fiscal year, the work was not completed and the progress estimates forwarded for work done up to the 1st of December, 1914, amounted to $2,331 net.

COW BAY.

Cow Bay (Port Morien), Cape Breton county, is on the east coast of Cape Breton island, about 18 miles to the eastward of the entrance to Sydney harbour.

A breakwater, built by the owners of the Gowrie coal mine, on the north side of the bay, came under charge of the department in 1873. It originally extended 1,374 feet to 17 feet at low water, or 23 feet at high water and was about 44 feet in width. The area of the basin enclosed between it and the shipping pier of the Gowrie mines, now the property of the Dominion Coal Company, was 17 acres, 10 acres of which had a depth of from 9 to 17 feet at low water.

The breakwater was seriously damaged during the great gale of August 24, 1873. Extensive repairs and improvements were made nearly every year up to 1895, when it consisted of 220 feet of old work protected on the seaward side by a beach of shingles and boulders, 361 feet of old work 44 feet in width with a new inner facework and a "break" on the seaward side built over the remains of the old work, and 793 feet of inner work with counterforts and connecting outer faceworks. The inner and outer faceworks were from 30 to 20 feet apart, they were connected by tie walls and the spaces were filled with earth and stone ballast.

In 1895-6, 260 feet of breakwater (1,121 from the shore end outward) was carried away down to from 2 to 6½ feet below low water; the outer faceworks from 1,121 feet from the shore end inward were badly damaged, and ballast was washed over the works and deposited in the dock along the inner face from 581 feet to 1,121 feet from the shore end.

Large expenditures were made every year from 1896-7 up to 1908-9, in repairing and strengthening the breakwater from 1,121 feet from the shore end inward. The

outer works were reconstructed and strengthened by filling the face-chambers with concrete and by close-piling the stringers and covering of the inner work from 581 feet to 1,114 feet from the shore end were renewed and a portion of the inner face-work, 350 feet in length (187 feet to 537 feet from the shore end) was widened and reconstructed. The placing of large concrete blocks against the seaward face of the breakwater was undertaken in 1906-7, and continued in 1907-8, 1908-9, and 1909-10.

During the fiscal year 1910-11, $12,748.50 was expended in extensive repairs.

During 1911-12-13, the sum of $4,977.84 was expended in placing large concrete blocks along the seaward face of the breakwater.

During the year ended March 31, 1915, the sum of $3,999.41 was expended by day labour in completing the placing of concrete blocks for the protection of the seaward face of the work.

CHEVERIE.

Cheverie, Hants county, is situated on the east bank of the Avon river, where it empties into the basin of Minas, some 15 miles north of Windsor. It is a good farming district, but a large part of the trade is the quarrying and shipping of gypsum to the United States. It has a population of about 350.

*Wharf.*

A wharf, about 100 feet long, was built here many years ago by the Provincial Government. In 1873-4, the department lengthened it to 170 feet, at a cost of $2,238.-88, the extension being of round log cribwork similar to the old work. In 1882, a further extension of 182 feet was built at a cost of $5,000. This piece of work was of square timber, close-faced, 25 feet high, 25 feet wide on the top (the same width as the old work), and the sides battering 1 in 12. In 1885, the sum of $600 was expended in repairs to the work. In 1904-5, the sum of $800 was expended in renewing the top of the middle third in length of the wharf, 80 feet long, 11 feet deep and 30 feet wide. The appropriation did not quite suffice to complete the work. In 1905-6, the sum of $1,000 was expended in taking down and rebuilding a portion of the shore end of the cribwork, 80 feet long, 8 to 12 high and the full width of the work, and in rebuilding a reinforcing block on the north side of the work, 100 feet long, 5 to 8 feet wide, to the full height of the work. In 1908-9, $2,935.19 was expended in extensive repairs and renewals.

In 1909-10, the sum of $4,337 was expended in constructing an extension to the wharf. The extension is 80 feet long, 25 wide at the top, 30½ wide at the bottom, and 27 feet high, built of native timber cribwork, and filled solid with stone. The work was done under contract with H. Macaloney of Parrsborough, N.S.

During 1914-15, the sum of $13,140 was expended in the construction of an extension to the wharf. The work was done under contract by Mortimer Parsons, the amount of the contract being $12,800.

The extension carried out during the year forms an angle with the old work of 60 degrees and is made up of seven blocks 25 by 25 feet and six spans of 12½ feet making a total length of 243 feet. It has an average height of 29 feet.

Contract started in July and was completed in December.

*Breakwater.*

In 1884, the Department built a detached breakwater 300 feet distant from the outer end of the wharf, for the purpose of protecting the latter from northerly seas to which it was exposed. This piece of work consists of solid cribwork, 130 feet long, 20 wide on top, 35 wide at the face and about 23 feet high, built of square timber and close sheathed on all sides. The seaward side, to a height of 10 feet below

H.W.O.S.T., has a slope of 1 in 1, the sloping faces being covered with 6-inch planking. The block is provided with mooring posts to assist vessels in coming to berth at the wharf and is also fitted with ring bolts and ladders.

In 1887-8, the sum of $500 and in 1896-7, the sum of $100 were expended in repairs. On the outer 100 feet in length the flooring, guards and some of the fenders were renewed. Sixty feet shorewards was floored and 205 feet in length of the work was raised from a height of 1 to 3 feet. In 1902, the sum of $768.23 was expended in the purchase of timber in readiness for the next year. In 1902-3, the sum of $2,999.34 was expended in the construction of an extension to this detached breakwater. The new block was 100 feet long, 25 wide on top and 22 in height, battering on the landward side 1 to 4 and plumb on the seaward face. In 1903-4, the sum of $1,487.29 was expended in completing the work.

CRIBBIN'S POINT.

Cribbin's Point, Antigonish county, is situated on the west side of St. George's bay, 8 miles to the southward of Cape George and 5 miles to the northward of the entrance to Antigonish harbour.

The wharf, including a block at the outer end, 48 feet by 20 feet in line of work, built in 1891-2, is 320 feet in length and has an approach partly in embankment with stone retaining wall and partly in clay cutting, 195 feet in length. It is 20 feet in width for a further distance of 180 feet or to the original outer end and 48 feet in width over the outer 20 feet. The seaward side of the wharf from within 50 feet of the inner end to the outer block is protected by close-sheathing and a talus of quarried stone sloping 3 to 1 from 2 feet above low water and has a timber break 4 feet in height, extending from within 50 feet of the inner end to within 40 feet of the outer end to prevent sand from being washed over the work into the dock.

In 1910-11, the sum of $1,816.01 was expended in reconstructing the old work for a distance of 50 feet from the outer end.

In 1911-12, the sum of $402.69 was expended in bulk-heading and re-ballasting four bays on the seaward side of the work.

In 1912-13, the sum of $999.45 was expended; $630.55 in repairs to the wharf and approach, including renewing the covering over 70 feet at the inner end, replacing about 70 feet of sheathing on the seaward side near the outer end and about 25 cubic yards of ballast in the outer block in slight repairs to the approach, and $368.90 in procuring ballast for use in 1913-14.

During the fiscal year 1914-15, the sum of $400 was expended in bulk-heading, re-ballasting and recovering all the face chambers at outer end of wharf.

Depth at outer end of work 4 feet. Spring tides rise 5½ feet.

Work was in progress in October, 1914.

DARTMOUTH.

*Dredging.*

Dartmouth, Halifax county, on the east side of Halifax harbour, is an incorporated town with a population of about 6,000. There is a steam ferry, owned by the town, plying between this town and the city of Halifax.

The work consisted of the dredging of mud from the ferry docks and adjacent wharves owned by the Ferry Commission of the town. The work in the docks was to give a sufficient depth of water for boats at extremely low tide, as propellor blades were often broken in the docks. The work in front of the other wharves owned by the town was done to give sufficient depth for the coal steamers supplying the ferry.

The nature of the material removed was hard pan and boulders. The average depth of cutting was 4½ feet, and the area of the work 1·2 acres. Depth below L.W.O.S.T. was about 14 feet in the docks and a depth of about 16 to 18 feet along

the adjacent wharves. The work was done on a scow measurement basis, the total amount removed being 11,424 cubic yards at 26c., making the cost of the work $2,970.24. The place measurement resulting from survey of what has been removed is 8,490 yards. The amount of the contract was $4,194.84; Nova Scotia Dredging Company, Ltd., contractors, with dredges "Prince Louis" and "Ajax H." Period of operation from December 31 to January 6 and from February 2 to March 31.

It was the desire of the Ferry Commission to have the area adjacent to the coal wharf dredged to a depth of 20 feet below low water, this, however, it was impossible to carry out as the material is of such a hard nature that the orange peel bucket dredge employed could not possibly remove it.

The quantity involved in taking out what remains down to a depth of 20 feet amounts to about 13,600 cubic yards.

### D'ESCOUSSE.

D'Escousse, Richmond county, is a thickly settled district on the northeastern coast of Madame island, and on the southern side of the eastern entrance to Lennox passage, a strait connecting St. Peter's bay with the Strait of Canso.

A wharf with a warehouse attached, was constructed by the department during 1902-3. With the exception of a cribwork shore abutment 15 feet in length the wharf is a pile structure extending to 12 feet at low water, 307 feet long, and 22 feet wide with an "L" on the western side of the outer end 22 by 22 feet; the bearing piles outside of the line of low water being of creosoted timber.

The warehouse, 30 feet long and 20 feet wide, was built originally on a pile foundation on the eastern side of the inner end of the wharf and as it was found to be inconveniently located to accommodate the steamers and vessels, which load and discharge at the outer end of the wharf, during the fiscal year 1909-10, the sum of $633 was expended in removing the warehouse and in placing it on a separate creosoted pile foundation in the corner formed by the "L" and the main structure of the wharf.

During the year 1914-15, the sum of $1,039.98 was expended by day labour in the renewal of the top of the work, consisting of 22,500 feet board measure of covering, 15,340 feet board measure of floor-stringers and 3,680 feet board measure of cap-timbers.

Spring tides rise 6 feet.

### DEVILS ISLAND.

Devils island, is a small, low island about 2,000 feet in length by 1,000 feet in width, with its highest point about 15 feet above H.W.O.S.T., situated about 8 miles to the southeast of the city of Halifax and one-third of a mile from the mainland of Hartland point, to which it is connected by a reef covered with 3 feet of sand and having 3 feet of water over it at low tide. The island is permanently inhabited by about 100 people, wholly dependent upon fishing for their livelihood.

In 1892, a breakwater, 300 feet in length by 15 in width, with an "L" at the outer end (30 feet in length) at which there is a depth of 5 feet at L.W.O.S.T., was constructed, at a cost of $1,941.18. During the next eleven years, various small amounts were expended in making repairs to the work. In 1904-5, the sum of $499.49 was expended in building a small breakwater at the northern end of the island to prevent the sea from washing around and disturbing boats lying at or near the old breakwater on the west side. The work measures 155 feet in length, 15 in width and from 4 to 8 feet in height, substantially built of round-log cribwork and filled with stone ballast.

On June 19, 1905, a contract was entered into with Messrs. Reid and Archibald, to construct a new breakwater, immediately to the west of the old work, which was so

far eaten, both by the teredo and the limnoria, as to be of little further service. The amount of the contract was $5,980. The work to the level of high tide, is of creosoted timber.

In the year 1912-13, the sum of $14,745 was expended in beginning the construction of an extension to the breakwater built in 1905 by Messrs Reid and Archibald. The contract was let to Obed. A. Hamm of Mahone bay. In the year 1913-4, the sum of $6,687.80 was expended in the continuance of this contract.

The work was completed during the latter part of August of the year 1914, with an expenditure of $10,521.20, making the total cost of the work $31,954. When work was started this year however, a change was made in the construction by increasing the thickness of the walls from 2 to 4 feet and the cross walls, which were spaced 10 foot centres, to 1 foot instead of 6 inches. This so increased the quantities that an additional sum of $4,940 was added for placing a suitable handrail around the landing.

The work during the fiscal year 1914-15, has consisted in constructing the last 90 feet in length of the work. The completed work is 90 feet in length to the ell, which runs at an angle of 45 degrees to the main part of the work, the length of the ell is 150 feet, and the width of the breakwater on top is 16 feet. The base of the work up to 2 feet above low water is composed of massed concrete; the work above this to the top consisting of side walls 4 feet thick with cross walls 1 foot thick, spaced 10 foot centres. The bays are filled with stone. The upper portion of the work is strongly reinforced. Both sides are sheathed with 6-inch creosoted timber to 1 foot below low water. There is a concrete break on the seaward side of the work, 4 feet high by 3 feet thick. Work was begun in May and completed in August, 1914.

DIGBY.

Digby, Digby county, is the shire-town of the county, with a population of about 1,600, situated on the southwestern end of Annapolis basin. It is an important station on the D. A. Ry., 67 miles north of Yarmouth, 150 from Halifax and 20 from Annapolis, and the port of call for the daily steamer of the D. A. Ry. plying between Digby and St. John.

The pier, nearly 900 feet long, was originally built by the Provincial Government, some years before Confederation. Full particulars of the work will be found in the departmental reports for 1906-7, 1909-10, 1911-12 and 1912-13.

The wharfage collections at this pier now exceed $4,000. There is consequently great wear and tear and frequent need for repairs and renewals.

1913-14, the sum of $1,310.65 was expended in necessary repairs and renewals to the pier, also the sum of $298.74 was expended in the renewal of about 1,400 cubic yards of sand and gravel from alongside the fishing wharf in proximity to the public pier, bringing the total expenditure up to $1,609.39.

In 1914-15, the sum of $2,000 was expended in extensive repairs and renewals to the pier. The work done consisted of the renewal of a considerable area of the floor, which wears out very rapidly under the extensive freight traffic; the renewal of a number of fenders and the splicing of a number of piles at and near low water mark, which were eaten to a very small diameter by the terĕdo.

*Dredging.*

In 1914-15, the Maritime Dredging and Construction Co., of St. John, N.B., under an extension of their contract of August 19, 1913, removed 100,004 cubic yards of sand and mud, scow measurement, at 24½ cents per cubic yard, from the berth and approach to the pier, with their spoon dredge *Iroquois*. The work was begun on 6th of July, and finished on 19th of August, 1914.

The object of the dredging was the enlargement and deepening of the berth alongside, and approach to, the public pier, to facilitate the arrival and departure of the daily steamer of the D. A. Ry. plying between Digby and St. John. The dredging was done to a depth of 18 feet at L. W. O. S. T. Spring tides rise 26 feet.

The dimensions of the dredged area are approximately 1,198,550 square feet comprised in a length of 2,000 feet by a width of 400 to 800 feet.

The same company, under an extension of the same contract, removed 16,481 cubic yards of sand and gravel, place measurement, by their spoon dredge *Beacon Bar*, at 59 cents per cubic yard from the Racquette, a cove or small bay about half a mile to the north of the Government pier. The work was begun on 14th of July and finished on 22nd of August, 1914.

The object of the dredging, which was done to a height of from 3 to 6 feet above L.W.O.S.T., was to facilitate the arrival and departure of schooners and other craft at the fishing wharfs.

The dimensions of the dredged area are approximately 206,072 square feet, comprised in a length of 1,300 feet by a width of 100 to 200 feet.

### EAST BAY.

East bay (north side), Cape Breton county, is as the name implies, on the north side of East bay, an arm of the Great Bras D'Or lake, 5½ miles from its head.

The wharf built by the department during 1889-90 is 220 feet in length, extends to 10 feet at low lake level and consists of an approach of brush and stone 50 feet long and 20 feet wide; of four native timber cribwork blocks, each 20 by 20 feet, and of an outer block also of native timber, 20 feet in line of work and 40 feet along outer face with intervening spans of 17½ feet in width.

During the fiscal year 1902-3, the sum of $600 was expended in repairing the approach and in renewing the floor-stringers, covering, guard-rails and fenders of the block and span work and the face-timbers and ties above water in all the blocks excepting the outer block.

During 1911-12, the sum of $109.62 was expended in the construction of a freight shed on the wharf. The building is 10 by 12 feet with 7 foot posts and walls and roof covered with cedar shingles. It is provided with one wide door and one window and the outside walls are painted with two coats of paint.

During the year 1913-14, the sum of $1,135.04 was expended in procuring materials for a new block, 20 by 40 feet, with creosoted timber substructure, at the outer end of the old work, and in building, placing and securing the substructure in place.

During 1914-15, the sum of $1,000 was expended in completing the new outer block at the outer end of old wharf, commenced during 1913-14; in connecting the same with the old work, and in renewal of covering, stringers, cap-timbers and upper fenders in the old work.

### EAST BERLIN.

East Berlin, Queens county, is a small fishing settlement, about 11 miles northeast of Liverpool, and has a population of about 350. During the year 1902-3, $2,000 was expended upon the construction of a breakwater. In 1903-4, a further sum of $700 was expended in extending the same. In 1906, the sum of $1,500 was expended in extending the breakwater, and beginning a wharf at the end of it. In 1910-11, an additional sum of $2,000 was expended in further extending this wharf, and during the past fiscal year the sum of $599.90 was expended in effecting repairs to the end.

On the extreme eastern point of the village, and partially protecting a small harbour, is a shingle beach about 700 feet in length, which is bare at about half tide. The centre of this beach was taken as the site of this work, and upon it a cribwork beach

protection or small breakwater was constructed. This work was 600 feet long, 10 feet wide on top, and has an average height of 9 feet, being constructed of open-faced, round log, stone-filled cribwork. This protected a small cove and kept the beach from being destroyed, but the anchorage for boats was limited, so that in 1906, a wharf was commenced from the outside end of this breakwater. In 1910, it was extended, so that the work was 270 feet long, 14 feet wide on top, and 18 feet high at the outside end. This work is also constructed of round log, stone-filled, cribwork, thoroughly ballasted, and is covered with 2-inch plank. It is well fendered and firmly fastened.

In March, 1914, a storm carried away 40 feet of the outside end of this breakwater. A large portion of the material in the destroyed part of the work was saved, and during the past year was rebuilt. The work was commenced September 17, and completed November 6, 1914. Spring tides rise 7 feet, neap 5 feet.

### EAST CHEZZETCOOK.

East Chezzetcook, Halifax county, is situated on the east side of Chezzetcook inlet, twenty miles west of Halifax, with a population in the surrounding neighbourhood of about 1,000 engaged chiefly in fishing, agriculture and mining.

In the year 1900-1, a pile wharf with a stone and earth filled approach was built 182 feet in length, the first 70 feet consisting of an approach formed by building stone retaining walls on each side and filling in the centre with earth and stone; the outer 112 feet was constructed of piles, each bent being spaced ten foot centres. The width was 25 feet, the approach being 29 feet at the shore end to 25 feet where the pile work commenced. The height at the outer end was 17 feet.

During the year 1914-15, the sum of $1,399.33 was spent in placing a pile work ell on this wharf, 35 feet long by 35 feet wide, with an average height of 12 feet, and the construction of a shed, 12 by 14 feet square, with a height of 8 feet to the eaves, and 14 to the ridge.

Work was commenced October 8 and completed February 7, 1915.

### EAST CHEZZETCOOK, (GRAFT BEACH).

East Chezzetcook, Graft Beach, Halifax county, is a deep inlet on the Atlantic coast, 20 miles east of Halifax, surrounded by a population of 300 or 400 people engaged in farming.

During the year 1910-11, the sum of $1,128.33 was expended in the purchase of timber for the construction of a detached breakwater to be completed under the next year's appropriation. During the year 1911-12, the sum of $468.50 was expended in the purchase of additional material for this purpose, but it was decided to change the location of the breakwater to a point known as the Graft beach. In the year 1912-13, the sum of $7,260 was expended, under contract with Messrs. Gerrior and Sweet, in the construction of the breakwater. Of this amount $100 was held back by the department to insure the placing of 1,700 feet b.m. of planking which the work lacked at the close of the season. The breakwater is 300 feet in length, 20 feet in width and has a height of 4 feet above H.W.O.S.T. On the eastern side of the whole work is a break 3½ feet in height.

In the fiscal year 1913-14, the sum of $4,124.53 was expended on a cribwork extension to the breakwater, 100 feet long, 30 feet wide, with an average depth of 21 feet. The work, however, was not quite complete, it being necessary to place a considerable quantity of ballast, also the sheathing, flooring and some floor stringers. During the latter part of the year 1913-14, the sum of $600 was paid under contract with Andrew Smith to put the work in a condition to withstand the winter. Mr.

Smith's work consisted of placing 600 tons of ballast, sheathing the work for 100 feet in length, placing the stringers and flooring on hand and completing part of the break.

During the months of September and October in the year 1914, the sum of $499.48 was expended by day labour in building up the outer 80 feet of the work, which had settled from 1 to 2 feet, and the placing of the ballast, floor stringers and planking, and building 40 feet of the break.

Work commenced August 20th and was completed in the early part of October.

EAST CHEZZETCOOK (RED ISLAND).

In 1904-05, the sum of $3,993.26 was expended in the construction of a detached breakwater, for the purpose of forming a shelter for fishing boats and other craft. The work was built 420 feet long by 14 wide, and from 6 to 8 feet high, substantially constructed of cribwork and resting on a sub-structure of brush and stone 20 feet wide and 2 feet thick.

During the year 1905-06, a further sum of $400 was expended in completing this work, making it 860 feet long, 16 feet wide and 16 feet high, the cribwork resting on a mattress of brush and stone. During the fiscal year 1913-14, the sum of $207.70 was expended in placing 200 tons of ballast, bolting down the old caps, spiking down old flooring and rebolting fenders over a section of the work 100 feet long by 14 feet in width.

During the fiscal year 1914-15, the sum of $1,098.72 was expended in repairing 100 feet in length of the work. Repairs consisted in placing some new stringers and planking and raising this portion of the work to an average height of 2 feet, making up for settlement which had taken place.

Work was begun August 20 and completed on September 18, 1914.

EASTERN PASSAGE.

Eastern Passage, Halifax county, is situated about 5 miles southeast of Dartmouth, on the eastern side of Halifax harbour. It is an important fishing village with a population of from 300 to 400, chiefly engaged in fishing and farming. A small brook empties into a cove and is used to keep the channel open for boats, but of late years it failed to accomplish this purpose. In the year 1900-01, a small low barrier was constructed, consisting of two rows of posts driven into the sand to a depth of from 4 to 5 feet and having a common height of 3 feet above H.W.O.S.T. These posts were separated longitudinally 6 feet and small logs were used as laterals. Loose brush and stone filled up the spaces, so that it was practically constructed of a light quality of stone-filled cribwork. This protection is 802 feet in length, 8 feet wide on top and ranges from 6 feet to 8 feet in height, being constructed at a cost of $2,000.

During the year 1908-09, the sum of $4,979.71 was expended in the construction of a breakwater for the further protection of the harbour. The work was 350 feet long, of which 200 feet is 10 feet wide and 150 feet is 15 feet wide. The work is from 10 to 15 feet high, substantially built of round log cribwork. Some 10,000 feet in length of the brush fence was also constructed to check the driving of the sand.

During the year 1910-11, the sum of $584 was expended in completing the outer end of the breakwater which was left in an unfinished condition in the year 1908-09. During the fiscal year 1911-12, the sum of $3,345.84 was spent in removing 9,961 cubic feet of sand to form a channel for fishing boats. Work was done under contract with Messrs. Beazley Bros. of Halifax.

During 1912-13, repairs to the breakwater were made, the sum of $193.45 being spent and in the year 1913-14, 1,000 tons of ballast were placed and some general repairs undertaken, at a cost of $700.47.

During the fiscal year 1914-15, the sum of $698.63 was expended in rebuilding 335 feet in length of the beach protection which was erected during the year 1900-01.

Work was commenced October 1, and completed November 24, 1914.

### EAST FERRY.

East Ferry, Digby county, is a fishing and farming settlement of about 100 people, situated about 30 miles southwest from the county town of Digby, on the extreme end of the mainland of Digby neck, or on the east side of Petite Passage, on the opposite or western side of which, at Tiverton, the Department built a breakwater, in 1903-04, at a cost of $17,110 by contract.

In 1914-15, to afford some much needed shelter to the fishing fleet, and to facilitate the transport of passengers and mails across the passage, the Department built a breakwater, by contract. The work is 223 feet long, from 20 to 30 feet wide and from 15 to 28 feet high, provided on the north or seaward side with a break, and on the south side with an inclined ramp. For the convenience of local shippers, a freight shed, 30 by 12 feet was also provided. As a protection against the teredo the outer end, and 40 feet on each side next the outer end, were sheathed with creosoted timber. The work was begun about the 20th of August, 1914, and finished early in February, 1915. Contractors, Engineers and Contractors, Ltd. Cost of land for approach, $100.

### EAST GREEN HARBOUR.

East Green Harbour, Shelbourne county, is a scattering settlement, about 2 miles long, the southern extremity of it being close to the site of the breakwater and about 1½ miles northwest of Lockeport. The people are practically all engaged in the lobster fishing, there being about 25 families in all dependent upon this industry for support. The shore is bold and exposed, so that a breakwater was necessary in order to protect a safe landing at all times, and would also permit them to handle more gear in connection with this fishery. There is a public right of way from the road to the site of the proposed breakwater so that no land was necessary.

During the past fiscal year, $999.48 was expended in the construction of this work. It consists of a rock bank, 40 feet long, 16 feet wide, and 100 feet long of continuous cribwork, 10 feet wide, with a height at the outer end of 11 feet. This cribwork is built of the usual round log, fendered and ballasted to the top. It has a batter on the outside of 3 inches to a foot, and on the inside of 1 inch to a foot. Work was commenced on the 1st of October, and completed on the 4th of November, 1914,

Spring tides rise 7 feet, neap 4½ feet.

### EAST PORT LEHEBERT.

East Port LeHebert, Queens county, is a village about 15 or 17 miles east of Liverpool, with a population of about 150. All these people are engaged in fishing, their principal income being derived from the lobster fishery. They needed for a number of years something to protect their lobsters when deposited alive in crates, from damage by the floating ice.

During the past fiscal year $1,195.65 was expended. A new pier, 22 feet long, 10 feet wide, was constructed inshore from the old piers, and an approach walk 336 feet in length, 8 feet wide, connecting the piers with the shore, was likewise built. This approach consists of block and span work, there being 9 cribwork piers, each 9

feet in length, 8 feet in width, and 9 spans, each 24 feet in length, with a shore span 35 feet in length. The height of the new work at the outside end is 20 feet, whilst the height of the outside end of the old pier is 25 feet. This work was commenced September 4, and completed October 28, 1914. Spring tides rise 6 feet, neap 4 feet.

EAST RAGGED ISLAND.

East Ragged Island, or as it has been called in our official records, Rockland, Shelburne county, is a fishing settlement, situated on the eastern side of East Ragged Harbour, about 4 miles northeast of Lockport. In the year 1898-99, the department constructed a wharf, which was built of solid, round log cribwork, filled with ballast to the under part of the floor. This wharf was 181 feet long, 20 feet wide on top, with the exception of the outer end, which was constructed in the shape of an "L" or a turn, 30 feet in length, and 40 feet in width. In the year 1905-06, this wharf was extended, in order to afford accommodation for a steam ferry boat which plies between Lockeport and Fruids Point railway station, commonly termed Lockeport station. It was necessary for the accommodation of not only the people of Lockeport, but those of Little Harbour and Louis Head, that this wharf be made a port of call for the ferry; consequently an extension, which consists of pile trestle bents, situated 10 feet apart, was constructed for a length of 100 feet. This extension is 20 feet wide on top, there being a depth of about 9 feet of water at L. W. O. S. T. at its outer end.

During the last fiscal year, the sum of $651.87 was expended in effecting necessary repairs. Work was commenced on October 1, and completed on October 28, 1914. The top of the work was renewed, that is, the planking, fenders, stringers, etc., a large number of fenders were replaced, and the whole work received a thorough overhauling. Spring tides rise 7 feet, neap 4 feet.

EAST RIVER.

East River, Pictou county, the most easterly of the three branches of Pictou harbour. It is navigable for small vessels from opposite Pictou to the town of New Glasgow. With a view to making the river navigable, between Pictou and Trenton, for ocean going vessels up to 10,000 tons capacity, this department has for the last five years been dredging a new channel and turning basin, the latter being situated opposite the works of the Nova Scotia Steel and Coal Co., at Trenton. This work is not yet completed. As the natural course of the river is somewhat tortuous it was deemed expedient to obviate this by constructing through Stonehouse point a lock 638 feet long and regulating raceway and to cut channels through Cantley and Shipyard points, the channels to be 100 feet and 150 feet wide respectively. To carry out these improvements a contract was let to Messrs. McDougal Bros. of Ottawa, for $390,701.35, in April, 1913.

In 1913-14, the common excavation from the lock and raceway amounting to 70,000 cubic yards were taken out and 3,600 cubic yards of rock from the lock. About 6,400 square feet of rock face have been channelled. During the winter months, 20,700 lineal feet of spruce piling was driven in the two timber approach piers situated at the north entrance to the lock. Coffer dams were built at both the entrances to the lock.

The total amount for work performed and materials delivered during the fiscal year 1913-14, came to $53,607.60.

During the fiscal year 1914-15, the sum of $184,860.15 was earned for work done and materials delivered. The work consisted of clearing, grubbing, unwatering, 222,400 cubic yards of common excavation; 78,360 cubic yards of rock excavation; channelling rock surface, 24,200 square feet; concrete in raceway bridge, 665 cubic yards, and timber approach piers at north entrance to lock.

The total expenditure on this contract up to 31st of March, 1915, amounts to $216,100.

*Dredging.*

The hydraulic dredge *P. W. D., No. 5*, was employed on this work each season since operations were begun in 1908. The total length of work authorized was 29,700 feet; the width of cutting is 150 feet at bottom, (except where it is widened to form turning basins): grade is 21 feet below L. W. O. S. T. in the part of the river north of the lock and 15 feet on the upstream, or south side, which will be regulated to a depth of 21 feet by the lock and dam.

During the season, the dredge removed 261,648 cubic yards of clay, sand and gravel, measured in place. On June 23, work was begun at the turning basin at north entrance to the lock at Stonehouse point, where 121,078 cubic yards were removed; on September 24th dredge began work in Trenton basin and removed 80,115 cubic yards; on September 24 it began cleaning up back filling left at beginning of season in second leg of channel when approach to lock was dredged; on October 26, dredge began a cutting 475 feet in length by 60 feet in width by 8 feet in depth to end of raceway, removing 16,755 cubic yards; on November 5, it started new work and cleaning up between stations 142 to 168, removed 42,700 cubic yards; on November 14 operations ceased for the season.

The amounts dredged to date are as follows:—

| | | | |
|---|---|---|---|
| 1908-9-10-11-12, | 1,421,941 | cubic yards | in situ. |
| 1912-13, | 234,431 | " | " |
| 1913-14, | 245,508 | " | " |
| 1914-15, | 260,648 | " | " |
| | 2,162,528 | | |

From the present conditions of the river, it is estimated that the quantity yet remaining to be done in cubic yards, measured *in situ*, is 757,828 yards.

ECUM SECUM.

Ecum Secum, Halifax county, is situated on the county line between Halifax and Guysboro. Population about 450, whose chief industries are fishing, lumbering and farming.

During the fiscal year 1914-15, the construction of a breakwater wharf was commenced for the protection of the fishing boats. The work consists of solid native timber cribwork 20 feet wide; 70 feet has been completed to full height, which is 3 feet above H.W.O.S.T.; 40 feet has been constructed to highwater mark, and 25 feet has been completed to 2 feet above L.W.O.S.T. The work when finished, will be 170 feet in length with an "L" 20 by 40 feet and will have an average height of 19 feet. The amount of money expended this year was $2,700.86 and an appropriation is asked for the completion of the work.

Work commenced September 8, and completed November 30, 1914.

FELTZEN SOUTH.

Feltzen South, Lunenburg county, is the name given to a large and prosperous fishing settlement situated at the west side of Lunenburg bay, 14 miles from Lunenburg by road and 7 miles by water. The population is about 200.

*Breakwater.*

During the fiscal year 1913-14, the sum of $16,539.10 was expended, under contract with Duncan L. Fraser, for the construction of a breakwater. This work is of

solid native timber cribwork, 420 feet in length, 20 feet wide for 220 feet of its length and 25 feet wide for 200 feet with an "L" 40 feet long by 20 feet wide. It has a height of 4 feet above H.W.O.S.T.

*Wharf.*

During the fiscal year 1905-06, the sum of $2,454.06 was expended in the construction of a pile timber wharf, 168 feet long, with a stone and gravel approach 31 feet long. The width of the work is 25 feet and it has an "L" on the outer end 28 feet by 32 feet, giving a face length of 54 feet and a depth at L.W.O.S.T. of 11 feet. The wharf is 20 feet high along the face.

In the fiscal year 1912-13, the sum of $466.55 was expended in repairs and renewals to this work. Old piles, broken by ice, were removed and fifty new ones driven to protect the wharf from further damage, and to replace those broken during the past winter.

During the fiscal year 1914-15, the sum of $600 was expended in repairing the wharf, and building a shed with a crib foundation, 18 by 24 feet. The repairs consisted of some new planking and the placing of a few new stringers and fenders.

Work begun August 19 and completed on October 8, 1914.

FINLAY POINT.

Finlay Point, Inverness county, is on the western coast of Cape Breton island, about three miles north of the entrance to Mabou harbour.

During 1903-04-05, a wharf 15 feet wide and extending 148 feet at low water, was constructed by the Department to serve as a landing place and a shelter for boats, and during 1907-08, a cribwork block 25 feet by 18 feet, was built adjoining the inner face of the outer end of the cribwork.

During 1912-13, the sum of $1,000 was expended by day labour in the construction of beach protection works at inner end of wharf, 200 feet long and 5 feet wide, consisting of pile-work filled in with brush and stone, and during 1913-14, the sum of $499.78 was expended in repairs to beach protection work, built during 1912-13, and in close-sheathing the inner end of wharf to prevent the brook from breaking through it.

During 1914-15, the sum of $349.82 was expended in cutting a passage for boats through the beach protection work and in the extension of the wharf inwards over the flats for a distance of 60 feet with brush and stone work.

FOX ISLAND.

Fox Island, Halifax county, is situated on the Atlantic coast of Nova Scotia, thirteen miles east of the city of Halifax, about 900 feet from the mainland. It is only some three or four acres in extent and no point on it is more than six feet above H.W.O.S.T. It has no permanent inhabitants, but during the summer it is used by the fishermen as a fishing station.

In the year 1886-87, the Department built a cribwork protection extending over the whole length of the beach between the island and the mainland, a distance of 935 feet, and in 1892 an extension of 252 feet in length was built to protect the main part of the island. Numerous expenditures have been made for repairs since that date.

In the year 1910-11, the sum of $1,408.81 was spent in the construction of a small breakwater 100 feet in length, for the protection of a boat landing on the western side of the island. In 1911-12, the sum of $1,129.53 was expended in the purchase of material for the construction of an addition to the breakwater. This addition was built under the 1912-13 appropriation, with an expenditure of $1,895.89. 100 feet in length, 25 in width and 15 to 20 feet in height. It is built of cribwork and has a break on the seaward side 4 feet high. In the fiscal year 1913-14, the sum

of $1,199.98 was expended in placing new logs to bring the work level, and replanking the work for a distance of 75 feet in length and 10 feet in width. The wharf which runs out from Fox Island was raised from 0 to 3 feet for eighty feet in length and 25 feet in width and new planking and fenders were also placed.

During the fiscal year 1914-15, the sum of $2,530.74 was expended in the partial construction of an extension to the breakwater, which, when completed, will be 40 feet in length by 25 feet in width and have an "L" 25 feet in length by 20 feet in width. This work has been completed to 2 feet above L.W.O.S.T. and enough material is on hand for the completion of the work. When finished there will be a depth of water at L.W.O.S.T. of 16 feet.

### FREEPORT.

Freeport, Digby county, is situated on the southern end of Long Island, on the east side of Grand Passage, 40 miles southeast of Digby Gut, and 26 miles southwest from Trout Cove. The population consists of about 700 people, engaged chiefly in fishing and farming. It is a port of call for subsidized steamers plying between Yarmouth, N.S., and St. John, N.B.

In 1905-06, a breakwater of cribwork, 251 feet long, was built by contract, at a cost of $13,923.92. The lower portion of the work, up to 8 feet above L.W.O.S.T., or to 17 feet below floor level, is creosoted timber.

In 1908-09, the sum of $358.23 was expended in building a concrete wall on the seaward side of the shore end of the breakwater, to prevent the sea from washing away the approach.

In 1914-15, the sum of $89.50 was expended in building an extension 13 by 15 feet, to the freight shed on the end of the wharf.

### FRIAR'S HEAD.

Friar's Head, Inverness county, is on the west coast of Cape Breton island, 6 miles to the northward of the entrance to Margaree harbour.

A work undertaken in 1900-01, to close an opening in a ledge of rock with the object of affording partial shelter to a small wharf and anchorage for boats, and completed in 1902-3, consisted of a concrete wall 90 feet in length, 4 feet in width on top and 8 feet in height from 1 foot above low water. In 1903-4, the wall was extended 13 feet and a wall 4 feet in height and 4 feet in width was constructed on its seaward side, to prevent undermining.

During 1913-14, the sum of $251.56 was expended in repairing and strengthening the concrete wall, which had been damaged during a heavy gale.

During 1914-15, the sum of $324.07 was expended in removing rocks out of the boat channel, from the inner basin to the entrance of the harbour.

### GLACE BAY BEACH.

Glace Bay Beach, Cape Breton county, is situated on the northern coast of Cape Breton island, between the towns of Glace Bay and Port Morien.

During the year 1908-09, the Department constructed under contract, a work to protect the public road crossing the beach at the head of Big Glace bay, and separating the bay from the Big Glace Bay lake. The work is 4,000 feet in length and consists of pile-work filled in with brush, as follows: Piles were driven 4 feet apart centre to centre transversely and 5 feet apart centre to centre longitudinally, in a trench excavated to 2 feet below level of high water. The space, longitudinally, between the piles, was filled in to a height of 6½ feet above the level of high water with small spruce trees, trimmed and closely packed, after which the tops of the piles in each bent were connected with ¾-inch tie rods. The total cost of the work was $9,415.72.

The brush filling, for a distance of about 700 feet, in the centre and most exposed part of the work was washed out by the sea during 1911-12, leaving the piles standing, and during 1912-13, the sum of $647.16 was expended by day labour in replacing the brush on the washed out portion of the protection work.

During the year 1913-14, the sum of $1,998.14 was expended in placing sheet-piling for a distance of 520 feet along the front of the weakest portion of the beach protection work and in bracing the same, and during 1914-15 the sum of $329.96 was expended in continuing the sheet-piling on the seaward face of the old work for a distance of about 80 feet.

GRAND ETANG.

Grand Etang, Inverness county, is on the gulf of St. Lawrence about midway between the harbours of Margaree and Cheticamp on the western shore of the island of Cape Breton.

Works designed to improve the entrance to a large pond and thus make it available for the use and shelter of fishing boats and small vessels were completed in 1894-95, and a bridge across the pond about 500 feet within the entrance, was constructed during 1895-96, and reconstructed during 1902-03.

The works include the dredged channel between two piers placed 87 feet apart, except at the entrance where the distance between them is 44 feet. Each pier consists of brush and stone work 135 feet in length; brush and stone embankment with talus and covering of stone 130 feet in length; open-faced cribwork 100 feet in length, and a cribwork head 30 feet in line of work by 48 feet with creosoted substructure reconstructed in 1908-09. The brush and stone work and about 85 feet of brush and stone embankment, on each side, are founded on a bottom excavated to one foot above extreme low water and the remainder of each pier on the natural bottom; the depth at the outer end at extreme low water being 4 feet 6 inches.

The "bridge" as reconstructed in 1902-03, is 563 feet in length, including the east and west approaches of brush and stone with cribwork abutments, respectively 94 and 51 feet in length, and 438 feet of creosoted pile work. It is provided with a handrail on each side, an opening for boats and a draw. The depth at extreme low water over the central 200 feet is about 6 feet, and to firm bottom, through soft mud and silt, from 21 to 24 feet.

During the year 1910-11, the bridge was repaired and 50 feet of the cribwork on each side of the channel were reconstructed.

During 1898-99, dredging between the piers to 6 feet at extreme low water was performed and during 1910-11-12, the channel, the pond inside up to the bridge and outside beyond the outer end of works, the depth of water was increased to an average depth of 9 feet at low water by dredging.

During 1911-12, the sum of $479.75 was expended in urgent repairs to the brush and stone channel protection works, and during 1912-13, the sum of $3,000 was expended by day labour in rebuilding the brush and stone work for a height of 10 feet and for a width of about 12 feet, for a distance of 200 feet on the north side and a distance of 255 feet on the south side.

During the year 1913-14, the sum of $1,000 was expended in repairs to the cribwork heads of the channel protection piers, which were severely damaged during the heavy gale of December 30, 1912. The repairs consisted in placing brush mattresses in the bottom of six bays out of which the ballast had been washed, and in filling them in with heavy stone and in the renewal of part of the plank covering which had been removed by the sea during the gale.

During 1914-15, the sum of $799.81 was expended in repairs to the top of the bridge, consisting of the renewal of a covering, cap timbers and railing.

GRAND NARROWS.

Grand Narrows, Cape Breton county, is on the southeastern side of the Barra strait, which connects the great with the Little Bras d'Or lake.

The old wharf, near the station of the Intercolonial railway and serving as a landing place for steamers with mails and passengers from Baddeck, was 287 feet in length, including 67 feet of cribwork, filled with brush and stone and covered with gravel; 80 feet of pilework built in 1885-86, by the Department over the remains of an old landing pier, built by the Provincial Government, and an extension 140 feet in length built by the Department in 1883-84. The extension consisted of three blocks, each 20 by 20 feet, and an outer block or head 20 feet in line of work and 60 feet in length with opening of about 16 feet.

In 1901-02 and 1902-03, $3,012.16 was expended in reconstructing the wharf and in extending it to 10 feet with creosoted timber piece-work, the work being then 297 feet in length, 24 feet in width for a distance of 277 feet and 30 feet over the outer 20 feet, with a depth at the outer end at low lake level of 11 feet.

In 1903-4, and 1904-5, $3,901.86 was expended in extending the wharf 37½ feet to 15 feet at low lake level, and in the construction of an "L" 30 feet by 30 feet on the southern side and at the outer end of the extension.

In 1905-6, the sum of $964.44 was expended, $900 for removing the remains of old cribwork which projected beyond the southern face of the pile-work extension, and in constructing a freight shed, 25 feet in length and 12 feet in width, and $64.44 for repairing and strengthening the southwest corner of the "L" which had been damaged by a steamer.

During the years 1912-13, and 1913-14, the sum of $329.25 was expended in urgent repairs to the covering of the wharf.

During 1914-15, the sum of $1,499.94 was expended by day labour on repairs to the top of the wharf, consisting in the renewal of covering, cap-timbers and of 12 fender piles on the outer corners of the work.

GROSSES COQUES.

Grosses Coques, Digby county, is situated at the mouth of a small river that enters St. Mary's bay about seven miles southwest of Weymouth, and three miles from Belliveau's Cove. The settlement comprises a scattered population of about 300, engaged in farming and to a small extent in fishing.

A complete report of the work done at this place may be found in the departmental report for 1904-05.

In 1913-14, the protection to the stream on its eastern side was extended shorewards and partially rebuilt. A length of about 400 feet in all was built, at a cost of $3,997.54, the work being of substantial round log cribwork.

In 1914-15, the rebuilding of the breakwater groyne on the east side of the mouth of the stream was completed at a cost of $2,000, the new work being 670 feet long, 12 feet wide and from 3 to 10 feet high.

GUNNING COVE.

Gunning Cove, Shelburne county, is a small settlement, consisting of farmers and fishermen, the population being about 300. It is located about 5 miles southwest of Shelburne, the distance by road, however, being about 12 miles. In the year 1899-1900, the wharf was constructed to afford landing privileges to the people in the vicinity. It was 174 feet long, the first 55 feet consisting of a rock bank, 20 feet in width, the next 49 feet consisting of 2 round log cribs, each 18 feet in length, separated from each other by a span 13 feet in length; this work was also 20 feet in width.

The last portion of the wharf, 70 feet in length, consists of pile trestle bents, separate 10 feet apart, the first 40 feet being 20 feet wide, whilst the last 30 feet has a width of 40 feet. It has a height at the outer end of 19 feet. During the past fiscal year, the sum of $506.02 was expended in effecting necessary repairs. It was commenced on October 5, and completed November 16, 1914. The entire top of the work was renewed, that is, the plank, stringers, both interior and exterior, guard-rail and caps. Two-thirds of the fenders were replaced, about 20 bearing piles had to be renewed, and slight repairs were made to the approach. Spring tides rise 7 feet, neap 4 feet.

HAMPTON.

Hampton, Annapolis county, formerly called Chute's Cove, is situated on the southeast coast of the Bay of Fundy, twenty-seven miles northwest of Digby Gut and six miles northwest of Bridgetown, an important station on the Dominion Atlantic railway. It has a population of about 200 engaged in fishing, farming and the export of cordwood and timber.

In 1855, a small breakwater, 165 feet long, was built by the inhabitants, aided by the Provincial Government, full particulars in regard to which will be found in the departmental reports for 1909-10 and 1910-11.

In 1912-13, the sum of $544.03 was expended in general repairs to the breakwater. A piece of solid cribwork break on the seaward face and shoreward end was rebuilt, 12 feet long, 12 feet wide and from 5 to 8 feet high; 20 new fenders were bolted into position and the floor of the work was patched and repaired.

In 1914-15, the sum of $3,000 was expended in extending the breakwater by a new block of substantial cribwork, 50 feet long, 29 feet wide and from 26 to 32 feet high. The work is not quite completed and will cost about $1,000 to complete it.

HANTSPORT.

Hantsport, Hant's county, has a population of about 1,500, and is situated on the west bank of the River Avon, which is here 1¾ miles wide. It is about half-way between Windsor and the mouth of the river, where it enters the Basin of Minas, and is quite an important station on the Dominion Atlantic railway, the distance from Halifax being about 53 miles.

The wharf which was constructed in 1897-98, is of stone filled cribwork 200 feet long, 32 wide with an "L" 32 by 33 feet long on the outer end, giving a face length of 64 feet where there is a height of 26 feet and a depth at high water of 23 feet along the face. At low water it is dry.

In 1908-09, the sum of $498.30 was expended in renewing the whole top of wharf, including guard stringers and planking. In 1913-14, the sum of $49.93 was expended in replanking a portion of the work and in miscellaneous repairs.

During the fiscal year 1914-15, the amount of $1,065.88 was expended in repairs, which consisted of rebuilding part of the approach, tearing down the whole upper portion for a distance of 3 feet and rebuilding same. The top of the wharf was replanked and the shed painted.

Work commenced August 3 and completed December 24, 1914.

*New Wharf.*

During the fiscal year 1914-15, the sum of $23,994 was expended under contract with the Standard Construction Company of Halifax in the construction of a native timber cribwork wharf. The first plans for this wharf called for the carrying out of the work on a curve, but it was afterwards deemed advisable to have the face of the work straight, as this would allow of better wharfage accommodations for vessels.

The approach to this wharf is situated approximately 380 feet west of the old wharf. This approach is built of stone walls and is gravel filled, being 70 feet in length with an average width of 25 feet and average depth of about 4 feet. From the end of this approach, the timber cribwork, 20 feet in width, extends for a distance of 122 feet. It turns here at right angles and runs 382 feet, with a width of 25 feet, until it joins the face of the old wharf built in 1897. There are two ballast floors in the work, the bays are 10 by 12 feet and each alternate one is filled with stone. Average height along the face 28 feet.

Work began in June and was completed in November, 1914.

HEAD CHEZZETCOOK.

Head Chezzetcook, Halifax county, is a small settlement about 22½ miles east from Dartmouth by stage with a population of about 300.

A vote of $2,300 was included in the 1914-15 appropriation. The work consists of tearing down and rebuilding the whole wharf built before Confederation. The work was commenced early in November and two sides of the wharf were torn down and ballast thrown in the centre. $762.99 was expended. On November 17, operations were discontinued after having put the work in a safe condition to stand the winter. The wharf was to be used as a landing place for supplies which are brought in from schooners in large flat-bottomed boats.

Work commenced November 5 and discontinued November 30, 1914.

HORTON LANDING.

Horton Landing, is situated at the eastern end of Kings county, at the mouth of the Gaspereaux river, about midway between Avonport and Wolfville. It is a station on the Dominion Atlantic Railway and situated in the richest and most fertile agricultural district in the province.

A wharf was built on the left bank, near the mouth of the river, by the Provincial Government, from 70 to 80 years ago. Having fallen into decay and because so dilapidated as to be useless for shipping purposes, it was rebuilt on the site of the old work by the Department in the year 1888-89, at a cost of $2,252.88. It is 172 feet long, 65 feet wide at the onter end and 23 feet 6 inches wide at the inner end, of open timber cribwork, well fendered, ballasted and covered with plank. The site is a safe and sheltered one, being near the mouth of the river and though the work is dry at low water, owing to the great range of tide, from 40 to 48 feet, vessels drawing 18 feet can reach it at high water.

In 1903-04, the sum of $70.20 was expended in renewing six mooring posts and a few planks in the floor.

In 1913-14, the sum of $906.20 was expended for the purchase of timber for repairs and improvements to the wharf, but no actual work was undertaken on account of the wharf being in use too late in the season.

In 1914-15, the sum of $907.54 was expended in extensive repairs and renewals to the upper part of the wharf.

INDIAN BROOK FLATS.

Indian Brook Flats, Shelburne county, consists of a line of flats running off-shore from Cape Sable Island into Barrington Passage, and is distant from the village, often called Northeast Point, ½ mile to the southwest. This wharf not only accommodates the people of this village but about 500 other people living from 1 to 2½ miles therefrom. The occupation of all these people is fishing. In 1903-04, the department completed the construction of a wharf, the total cost of which was $3,239.32. The wharf, as constructed, consists of four distinct sections,—first, a rock bank approach 41 feet long; second, a piece of alternate block and span work 56 feet long; third, a pile trestle

bent stem 374 feet long, and fourth, a pile trestle bent head 40 feet long, making the total length of wharf 511 feet, which carries it from the shore line to the channel, which borders on the outside edge of the flat. The approach is of the usual rock bent style 27 feet wide on top, and has a height at the outer end of about 9 feet. The block and span work consists of two blocks of round-log cribwork, each 20 feet long, separated by a clear span of 16 feet in length. It has a width on top of 18 feet, and a height at the outer end of about 10 feet. The stem consists of 34 pile trestle bents, separated from each other, centre to centre of pile heads, 11 feet, with a common width of 16 feet and a height at the outer end of 11 feet. The head of this wharf, which is 40 feet in length, has a width of 50 feet on top. It is built of 5 pile trestle bents, well fendered and braced, and has a height at the outer end of 23 feet. During the past fiscal year, the sum of $449.68 was expended in effecting repairs which were commenced on November 4, and completed on November 30, 1914. The head of the wharf was replanked, and practically retopped. A number of new fender piles were set in around the head, the approach was repaired and a two-inch plank walk from the head to the approach, 8 feet in width, was laid on top of the old covering, whilst about 1,500 feet, B.M., of the old covering was replaced. Spring tides rise 8½ feet, neap 6 feet.

INDIAN HARBOUR.

Indian Harbour, Halifax county, is a small fishing village with a population of about 300, situated 29 miles by road from Halifax, or about 16 miles in an air line. It is on the east side of the mouth of St. Margarets Bay, 8 miles from French Village.

In 1904-05, the sum of $1,066.16 was expended in constructing a public wharf for the convenience of local trade and fishing. During the fiscal year 1905-06, the sum of $749.63 was expended in completing the work. The wharf is of block and span construction, the blocks being 10 by 20 feet, substantially built of cribwork, filled with stone and earth and well fendered with a span between each block of 12 feet. It has an approach of earth and stone 30 feet long. The main part of the wharf from the approach out is 100 feet long and 20 feet wide, with an ell 30 feet wide by 20 feet long, giving a face length of 40 feet and a depth at low water along the face of 9 feet.

During the fiscal year 1907-08, the sum of $299.22 was expended in blasting and removing rocks and boulders which obstructed the channel at or near the wharf.

During the fiscal year 1914-15, the sum of $565.47 was expended in tearing down and rebuilding the top 4 feet of the wharf.

Work commenced, November 20, 1914, completed March 26, 1915.

INDIAN POINT.

Indian Point, Lunenburg county, is an important place in Mahone Bay, about five miles from Mahone Town, with a population of 500 or 600, chiefly engaged in fishing, farming and lumbering.

During the fiscal year 1914-15, the Department expended the sum of $4,995.17 in the construction of a block and span wharf, constructed of native timber. The approach is 16 feet long by 20 wide at the wharf end and 40 wide at the shore end. The wharf from the approach out is 173 feet long by 20 wide with an ell 20 by 30 feet giving a face length of 50 feet. The wharf has an average height of 15½ feet and a depth at L. W. O. S. T. at the face of 12 feet. A shed measuring 12 by 14 feet was also constructed and placed on the ell of the wharf.

Work commenced, November 2, 1914, and completed March 18, 1915.

INVERNESS.

Inverness, formerly known as Broad Cove, Inverness county, is an incorporated mining town with a population of 3,500, on the northwestern coast of Cape Breton island, about midway between the harbours of Mabou and Margaree and 60 miles from

Port Hastings, on the strait of Canso, with which it is connected by rail.

McIsaac's pond, now Inverness harbour, is separated from the Gulf of St. Lawrence by a sand beach about 400 feet in width. For the purpose of shipping coal from the mines, many years ago, a company dredged a channel through the beach into the pond, and protected its sides with cribwork and pilework, but after a few years the channel filled up and was abandoned.

The property was bought by the Department with a view of reopening and protecting the channel.

The sum of $15,000 was voted for expenditure during 1914-15, towards the construction of works for the improvement of the entrance and instructions were received to prepare plan and specification for the construction of work, not to exceed the amount authorized and on June 2, 1914, these were submitted to the Department but nothing further was done in the matter.

Owing to the wrecked condition of the outer end of the old work on the southern side of the entrance, the sum of $500 was authorized for expenditure during 1914-15, by day labour, on urgent repairs to the damaged work, and the amount was expended in repairing, close-sheathing, reballasting and recovering the work for a distance of 32 feet.

IONA.

*Old Wharf.*

Iona, Victoria county, is on the northern side of Barra strait, which connects the Great with the Little Bras D'Or lake. It is a station on the Intercolonial railway, and a landing place for the steamer, which carrying mails and passengers to and from Baddeck, connects twice a day with the express trains bound east and west.

The old wharf, so called to distinguish it from the new wharf, built on the eastern side of the railway bridge, was originally constructed by the Provincial Government, but was acquired by the Department, by which it was reconstructed and extended.

The work is 195 feet long on the western face and consists of an approach 129 feet long and 20 feet wide, of a span 24 feet long and of a "head" 42 feet wide on the western, 22 feet wide on the eastern face and 70 feet long on the channel face.

The approach is constructed of close-faced timber cribwork, partly covered with gravel, and partly planked over, and the head is built on creosoted timber piling and was originally protected with hardwood fender piles but these were replaced with creosoted timber piling during 1907-8.

During the year 1913-14, the sum of $500.35 was expended in the renewal of covering and cap-timbers on the pile-work and in repairs to the cribwork approach, and during 1914-15, the sum of $150.15 was expended in completing repairs and renewals commenced during 1913-14.

*New Wharf.*

The "new wharf," so called to distinguish it from the old one on the western side of the railway bridge, was constructed by the Department in 1902, and extended during 1904. It is a block and span structure, 400 feet long, 20 feet wide for a distance of 138 feet and 30 feet wide for the remaining 262 feet; the blocks are constructed of round timber, creosoted to high lake level, and close-sheathed on the seaward faces and the outer end of the work. The wharf extends to 11 feet at low water, and is connected with the railway station by a road, 350 feet in length.

All freight for and from Baddeck, which is the distributing centre for the trade of Victoria county, is shipped via Iona thence to its destination by steamer or rail and as all this freight is landed at this wharf, during 1905-06, the sum of $1,000 was

expended in the construction of a warehouse, 40 feet long and 20 feet wide, placed alongside of its inner end and on a separate creosoted timber pile foundation.

During 1914-15, the sum of $1,100.68 was expended by day labour in slight repairs to the warehouse and in repairs to the superstructure of the wharf, consisting of renewal of stringers, covering, cap-timbers and upper fenders.

### IRISH COVE.

Irish Cove, Cape Breton county, is on the southeastern shore of the Great Bras d'Or lake, near the entrance into East bay.

The works are: a wharf, completed in 1892-93 and the diversion of a brook in 1907-08.

The wharf is a block and span structure of native timber, 161 feet in length and 20 feet in width, consisting of a shore abutment, 47 feet in length; a central block 20½ feet in length and an outer block, 57 feet in length with an "L" 20 by 20 feet. The depth at the outer end is 12½ feet at low or 13½ feet at high lake level.

A brook flowing through low meadow land to the shore thence in an easterly direction between the shore and a beach of shingle which had gradually extended to within 270 feet of the wharf was closed (in 1907-08), by the construction of a crib-work dam 40 feet in length and diverted by a new channel straight through the beach at a point 550 feet to the westward of the wharf.

During the fiscal year 1909-10, the sum of $964.52 was expended, $614.75 in repairs to the wharf including the renewal of 145 piles of the close-piling of the outer block and of 4,800 feet board measure of covering, and $49.95 in constructing a work of brush, stone and piles extending inward along the east bank of the brook, 240 feet from the dam, to prevent the brook from cutting through the low meadow land and resuming its former easterly direction.

During 1910-11, the sum of $600.31 was expended on the works: $416.20 in extending the dam on the eastern side of the brook, a distance of 250 feet, and $184.11 in placing and securing 43 new pieces of close-piling on weak portions of the blocks in the wharf.

During the fiscal year ended March 31, 1914, the sum of $199.86 was expended in urgent repairs to the wharf, consisting of close-sheathing of the outer faces of two blocks, in raising some of the floor-stringers and in the renewal of the wharf covering where absolutely necessary.

A further sum of $399.10 was expended during 1914-15 in temporary and urgent repairs to the wharf, which is in a very serious condition and will require to be rebuilt in the near future. The repairs consisted in replacing close-piling around the blocks to prevent the ballast from washing out.

### JAMESVILLE.

Jamesville, Victoria county, is a country district with a population of about 30 families, situated on the northern shore of the Great Bras d'Or lake, about 2 miles west of Iona, a station on the Intercolonial railway.

The sum of $2,500 was voted for expenditure during 1914-15 towards the construction of a breakwater to form a boat-harbour for fishermen consisting of an isolated round timber cribwork block, with creosoted timber substructure, 170 feet long and 16 feet wide placed in 7 feet at low water, parallel to and connected with the shore, a distance of 165 feet, with a pile-work approach, 16 feet wide, estimated to cost $5,200.

On June 19, 1914, instructions were received to expend the amount by day labour and as it was found impossible, owing to war conditions to import the necessary creosoted timber, it was decided to buy all the materials which could be obtained in the country during the present year, and to postpone the construction of the work

until next year, and of the amount voted, the sum of $2,066.01 was expended during 1914-15, in procuring all the necessary native timber, ballast and iron required for the construction of the proposed work.

JUDIQUE.

Judique (Baxter's), Inverness county, so called to distinguish it from Little Judique and Judique (McKay's Point), is situated on the western coast of Cape Breton island, near Campbell's Point, which is about midway between Long Point and McKay's Point, and about 4 miles distant from each.

During the year 1907-08, the sum of $891.52 was expended in the purchase of materials ,and during the year 1908-9, the sum of $1,200 was expended in the construction of a wharf 10 feet wide and 176 feet long, having a depth of 1.5 feet of water at low water spring tides at the outer end. Spring tides rise 4½ feet. This wharf, which is merely a boat-landing for small fishing boats, was completed on September 29, 1909, at a total cost of $2,091.52 .

During the year 1911-12, on August 12, 1911, the Department purchased from Duncan Gillis and Hugh Gillis a roadway 33 feet wide, from the public highway to the wharf property, paying Duncan Gillis $300 and Hugh Gillis $200 for said land.

During 1914-15, the sum of $400.19 was expended by day labour in the construction of a road 2,950 feet long and 16 feet wide, over the property purchased from Messrs. Gillis, to connect the wharf with the public road.

KELLY'S COVE.

Kelly's Cove, Yarmouth county, about 3 miles south of the town of Yarmouth. About a century ago it was the harbour of the place and around its shores was all that constituted the town.

Some years before Confederation, the Provincial Government built a breakwater here, 97 feet long, 23½ feet wide and 16 feet high at the outer end. The first expenditure by the Department appears to have been in 1897-98, when the old work was partially rebuilt.

A full account of the departmental expenditures from 1905 to 1913 may be found in the departmental report for 1912-13.

In 1913-14, the sum of $49.37 was expended in filling up a gap about 15 inches wide between the older portion of the breakwater and the extension built some three years ago; the new block having been shifted slightly by a great storm in January, 1913. Petty repairs were also made to the floor of the outer portion of the breakwater.

In 1914-15, the breakwater was extended, by contract, by a new block, 100 feet long, 34 feet wide and from 20 to 30 feet high, built of substantial cribwork and sheathed on the outer end and sides with creosoted planks, as a protection against the limnoria. Work was begun early in August and finished on the 4th of November, 1914. Contractors, Girroir and MacDonald, and amount of contract $8,990.

The sum of $99.10 was expended in replacing some stringers and flooring on the older portion of the breakwater, which had been damaged by a recent severe storm.

L'ARDOISE.

L'Ardoise, Richmond county, is on the eastern side of St. Peter's bay near its entrance from the Atlantic ocean and about 9 miles to the eastward of the southern entrance to St. Peter's canal.

The outer 400 feet of the breakwater at Martin's point, originally isolated but connected with the mainland in 1903-4-5, consisted of a cribwork core, placed over the remains of a former structure, covered with stone sloping 3 to 1 on the seaward side and at the outer end and 2 to 1 on the inner side, and having a concrete wall founded

at 4 feet above extreme low water, over the cribwork core on the seaward side and at the outer end, 3 feet in width on top and 4½ feet in height with the top flush with the surface of the stone covering.

Slight disturbances of the stone covering took place yearly from 1900 up to the winter of 1904-05, when during a furious gale, large masses of ice were thrown against the structure, destroying the covering stone, cutting several gaps through the concrete wall and covering and destroying the cribwork foundation of the concrete wall in places.

In 1906-7-8-9, a new wall of large stones and concrete, founded 2½ feet above extreme low water, was constructed outside of and close against the concrete wall on the seaward side and at the outer end, with the exception of 27 feet on the seaward side, 9 to 36 feet from the outer end, and the covering stones were replaced.

During the fiscal year 1910-11, the sum of $2,515.49 was expended in completing the stone and concrete wall on the seaward side 9 to 36 feet from the outer end; in replacing ballast and covering stones on each side of it; in constructing a concrete wall to protect the stone and concrete wall at the outer end and on the seaward side over a distance of 9 feet from the outer end, and in replacing the covering stones of the slope on the seaward side over a distance of 138 feet from the inner end outward and on the inner side over a distance of 168 feet from the outer end inward.

During 1912-13, the sum of $799.94 was expended in filling in some gaps in the concrete wall on the seaward face of the breakwater with concrete, in order to make it secure until a large appropriation can be obtained to repair the work thoroughly, and during 1913-14, the sum of $1,250 was expended in completing the repairs to the concrete wall on the seaward face of the breakwater, commenced during 1912-13.

During the year 1914-15, the sum of $199.86 was expended in repairs to the seaward face of the breakwater, for a distance of 35 feet by concrete work.

### L'ARDOISE BEACH.

L'Ardoise, Richmond county, is situated on the eastern side of St. Peter's bay, on the southern shore of Cape Breton island.

L'Ardoise beach separates Shaw's lake from Shaw's cove, and serves as a landing place for fishing boats, as a site for fishhouses and as a place to cure fish.

The beach has been washing away for some years, by the action of the sea, and during a heavy gale in November, 1909, the sea cut through the beach.

In order to prevent further damage and to preserve its usefulness, during 1910-11, the sum of $1,789.74 was expended in closing the gap in the beach by a pile, brush and stone dam, 100 feet in length and in the construction of a cribwork groyne, 120 feet in length and 10 feet in width for the purpose of preventing the further washing away of the beach.

During 1914-15, the sum of $320 was expended in the construction of cribwork to strengthen the pile, brush and stone work placed there during 1910-11 to close the gap.

### LITTLE BASS RIVER.

Little Bass River, Colchester county, is a settlement, three miles from Bass river, with a population of about 160. Chief industries are lumbering and farming.

During the fiscal year 1914-15, the sum of $2,353.09 was expended in straightening the river. This work was performed by the construction of a crib dam 93 feet in length, 12 in width and having an average height of 6 feet, and the opening of a cut through a neck of land, 127 feet in length, 13 in width, with an average depth of 10 feet. The sides of this cut are sheathed with poles 5 inches in diameter at the top end. These poles are held in place by walings, which in their turn are secured in place by ties which run into the bank and are anchored to deadmen. A dam, con-

structed of brush, stone and clay, is also built across another part of the river. This dam is 103 feet long by 23 wide on top, with a batter of 2 to 1 on either side to the toe, the average height being 10 feet.

Since this work has been completed, the object for which it was constructed, the deepening of the river in front of the lumber loading trestles, has been partially attained, and it is expected that with the spring freshets the desired benefit will be accomplished. This will be of great convenience to the lumbering interests and the people generally.

Work begun, July 10, 1914, and was competed March 31, 1915.

LITTLE HARBOUR.

*Dredging.*

Little Harbour (Clam Harbour) Halifax county, is situated on the Atlantic coast, 30 miles east of the city of Halifax. It has a population of about 125 whose chief industry is fishing, the value of the annual catch being about $10,000.

During the year 1914-15, an area was dredged to form a harbour and a channel connecting with same, the object being to make a safe harbour for fishing boats. The material removed consisted of mud and gravel. The average depth of the cutting was 8 feet and the area of the work .8 acres; depth below L.W.O.S.T., 5 feet.

The work was done by both scow and place measurement, 3,375 yards place measurement being removed and overcast at 29c. per yard and 8,537 yards scow measurement removed and scowed away at 39c. per cubic yard, making the total cost of the work $4,308.19. The amount of the contract was $4,509.57; contractors Nova Scotia Dredging Company, Ltd., with dredge "Ajax II." The period of operation was from August 27 to October 8.

LITTLE HARBOUR.

*Dredging.*

Little Harbour, Lunenburg county, is a fishing village of about 300 inhabitants, situated 27 miles west from Bridgewater. About $12,000 worth of fish is annually exported.

The work consisted of the dredging of mud and gravel from the harbour also from the channel leading into same, so as to make a safe port for the fishermen. The depth below L.W.O.S.T. is 6 feet, the average depth of cutting being 4½ feet. The work extends over an area of .34, of an acre. Total scow measurement removed to date 3,096 yards, at a cost of $1,773.30. The work is not completed, about 6,700 cubic yards, scow measurement, remaining to be dredged; the scow measurement quantity shown by the survey for the complete work is 9,750 cubic yards, and the place measurement 7,500 yards.

Work was done on a day labour basis, dredge employed being the "P.W.D. No. 15," with scows Nos. 1 and 2. A motor boat was hired for towing the scows to the dumping ground. Period of operation extended from October 15 to December 18.

This improvement when completed should be sufficient for a number of years.

LITTLE HARBOUR.

Little Harbour, Pictou county, is on the Northumberland strait, about five miles east of the entrance to Pictou harbour.

In 1907-8, the sum of $1,148.52 was expended in procuring about three-quarters of the material required for the construction of a wharf near the head of Little Harbour.

In 1908-9, the sum of $2,932.02 was expended in procuring the balance of materials required: in constructing a block and span wharf, 20 feet in width and 297

feet in length, extending to 2 feet at L.W.S. and in placing stone around some of the inner blocks to prevent scour.

In 1910-11, the sum of $798.23 was expended in completing, with the exception of placing the fenders, an extension 20 feet in line of work by 40 feet, forming an "L" 20 feet in length, and in part repairs to the roadway and approach to the wharf.

During the fiscal year 1914-15, the sum of $18.50 was expended in salving and securing the top part of a block, 20 by 40 feet, forming the "L" of the wharf, which was left unfinished in 1910-11, and which had been for some time drifting from place to place in the harbour.

The work was in progress in December.

### LIVERPOOL.

Liverpool is the shire town of Queens county, situated at the head of Liverpool bay. It has a population of about 2,800 and is a most important shipping port on the southern coast of Nova Scotia.

Total tonnage reported was about 40,000. The number of vessels owned in Liverpool is about 85, ranging from 9 to 250 tons burden each, with a total tonnage in the vicinity of 9,000.

During the past three fiscal years, considerable dredging, amounting to practically 175,000 cubic yards, scow measurement, has been performed at this place; and during the last fiscal year some 35,715 cubic yards were removed, the work being commenced on June 6, 1914, and completed on September 2, 1914.

The object of the work is to have a clear entrance into the harbour to a depth of 15 feet at L.W.O.S.T. This entrance has been twice established, but filling in between a point off the marine slip at Liverpool and a point marked by a black buoy outside the bar, has occured so quick and to such a serious extent that the dredging of this harbour has become a problem. The filling in is due to two causes; first, the sand which is of a very fine nature, sweeps in from the bay and meets off the Fort point; secondly, the silt and sawdust which comes in large quantities down this harbour and forms what is locally termed the Liverpool bar.

The removal of the mud and sawdust is quite easy, but the sand becomes packed, and is extremely difficult of penetration, particularly by the buckets of the dredge *Canada*, so that its removal is a slow and tedious operation.

The expansion factor used here is about 20 per cent, which seems to be approximately correct, although the continuous filling in renders the place measurement made at the time of the survey much smaller than it really is when dredging is commenced. Dredge No. 7 performed this work. The area dredged over by her was about 1,850 feet in length, and 100 feet wide. The nature of the material is sawdust and silt on the inside of the cut, and soft sand on the outside, whilst at a point just outside the centre of the bar is an accumulation of rocks, at which point we had to deflect the channel outwards, or in a northerly direction.

Spring tides rise here 6 feet, neap 3½ feet.

### LIVINGSTON'S COVE.

Livingston's Cove, Antigonish county, is situated on the southern shore of Northumberland strait about 2 miles southwest from Cape George.

For the purpose of affording shelter to fishing boats of the district and a landing place for steamers and small vessels, a pier extending to 9 feet at L.W.S. was completed by the department in 1903.

The work is 312 feet in length and is approached by a road, cut through the clay bank, 105 feet in length. The pier is a continuous structure and consists of a share abutment with stone retaining walls, 30 feet long nd 18 feet wide, on top of a crib-

work block 80 feet long and 19 feet wide, and a crib-work extension 202 feet in length and 24 feet in width, with an "L" on the southern side of the outer end 34 by 24 feet.

This work is fully described in the report of 1914.

During the fiscal year 1914-15, the sum of $1,599.90 was expended in cutting down to the creosoted timber substructure and reconstructing with native timber, 60 feet of the outer end of work, repairs to roadway and placing about 150 cubic yards of heavy stone on the seaward side of the wharf.

Work was in progress during the months of July, August and September.

LOCKEPORT.

The town of Lockeport, Shelburne county, is connected with the mainland by a long, narrow, sand-beach, slightly over ½ mile in length, which protects the north and west sides of the harbour. For a number of years, this beach had become so denuded of loose sand that on several occasions the extreme spring tides broke through it and caused several breaches. In order to save this beach from utter destruction, the department in 1900-1, constructed a beach protection, and extended the same in 1903-4. The total length of the old beach protection was 1,763 feet. During the past fiscal year, the sum of $936.76 was expended in reconstructing this old work. Work was commenced on September 19, and completed on October 31, 1914. The work itself consists of a double row of posts driven into the sand six feet, planked on the outside with 2-inch planks, fastened with 5-inch spikes, and on the inside with 1-inch boards fastened with 3-inch nails, to a height of about 6 feet. These rows of posts are driven in a line running parallel with the form of the beach 8 feet apart both longitudinally and laterally, so that the whole work forms a sort of double fence, and the 8-foot spaces between these fences are filled in with sand. In rebuilding this work, a considerable amount of stone and brush was placed in the bottom between the two fences, so as to form a nucleus, around which the sand might gather. This has worked very satisfactorily. The work is in the shape of a crescent, and particular care towards obtaining regularity of the said shape has been taken. It commences about 1,100 feet from the eastern end of the beach, and runs to the extreme western end. In renewing this work, it was found that 480 feet of the old work was buried in sand mounds created by indigenous sand grass which had collected the sand, sending forth new shoots which in turn collected more sand. One of these mounds is now about 16 feet in height. This work is practically all above ordinary high water mark, but on occasions, such as the equinoctials, the tides will be sometimes as much as 5 feet higher than ordinary, so that the 6-foot height is necessary in order to guarantee safety of this structure. Spring tides rise 7 feet, neap 4½ feet.

*Dredging.*

In order to improve the harbour, during 1913-14, 83,000 cubic yards, scow measurement, were removed, whilst during the past fiscal year 56,400 cubic yards were removed. This work was commenced last year on September 10, 1914, and suspended for the season on December 23, 1914. The principal object of the work is to make the harbour navigable for vessels of deeper draught than hitherto, and to provide anchorage for the increasing fishing fleet. During the past fiscal year, the channel for its entire length was widened 80 feet from the entrance of the harbour to the wharves, and along the water front additional dredging was performed, whilst the western end of the basin was excavated, so that from opposite the People's wharf the basin was excavated for a length of 250 feet, opposite the cold storage plant 125 feet to 80 feet, and opposite McMillan's wharf 50 feet.

The remainder of the work to be done consists of the excavation of a basin ranging in length from 920 feet to 1,075 feet, with a common width of 300 feet, together with

the removal of some material at the southern end of the wharf frontage opposite the wharves of William McMillan and Swim Brothers. This material cannot very well be removed until quantities of rock are taken up. The length of the channel from the harbour entrance into the wharves is about 2,200 feet. The length of water front is 1,220 feet. The channel is 200 feet in width, and the excavation along the water front is likewise 200 feet in width, with the exception of the last 120 feet, which varies from 200 feet to 80 feet. During the two years, the total quantity removed is 139,400 cubic yards, scow measurement. The place measurement shows that 119,206 cubic yards were removed.

There still remains about 77,500 cubic yards to be removed which, with the 20 per cent expansion factor, would make 93,000 cubic yards, scow measurement. Both years, the work on being shut down was in a condition of semi-permanency, and from examination, serious filling in does not seem to have occurred between seasons, which gives us every reason to believe that if these works are continued, the channel and basin will not fill up to any serious extent for a number of years.

LONG COVE.

Long Cove, Queens county, is situated about 3½ miles southwest of Port Medway. It is a long, narrow cove, jutting into an indentation of the coast, on the southern side of Port Medway Harbour. The chief industry is lobstering but a considerable number of men in the summer time are engaged in other fishing. In order to further encourage the fishing industry and to afford better accommodation, the construction of a breakwater was commenced in the fiscal year 1913-14, during which year $3,628.28 was expended.

During the past fiscal year, $1,199.80 was expended, practically completing the entire work. The breakwater is now 450 feet long, being 14 feet wide on top, with a batter on the outside of one to six and on the inside of one to twelve, so that the average width is about 15 feet. It varies in height, the first 80 feet in length having a height of from 2 to 4 feet, the next 80 feet from 4 to 6 feet, the next 80 feet from 14 to 10 feet, and the last 210 feet from 8 to 10 feet. There is a public road leading to the point of beginning of this breakwater. The breakwater is constructed of the usual round log, continuous cribwork, ballasted to the top, well fendered and fastened. The third section of 80 feet in length shows a greater height at the outside end, the reason being that there is a gap between the two ledges along which this work is being constructed, and this is perhaps the most important portion of this structure. The whole work is situated on the northern side of the cove, running at an angle of about forty degrees from the general direction of the said cove, and partially across the same, so as to prevent the undertow from breaking into the side of the harbour, and to create the necessary shelter. A few fenders are yet required to complete this work. Spring tides rise 7 feet, neap 5 feet.

LONG POINT.

Long point, Craigmore, Inverness county, is on the eastern shore of St. George's bay, about 15 miles to the southward of Port Hood, and 8 miles to the northward of the entrance to the Gut of Canso.

The point extends out a distance of about 500 feet from the general coast line and forms a small cove at its eastern side, which being partially sheltered from northerly winds and having a good landing beach, is resorted to by the fishing boats of the vicinity.

For the purpose of improving the landing to the seaward of the point and for the better protection of fishing boats, during 1904-05-06 the sum of $3,830.96 was expended in the construction of a round native timber cribwork breakwater, 210 feet long and 20 feet wide and in the construction of a road from the breakwater to the public road.

During 1914-15, the sum of $199.60 was expended in placing brush and stone at the inner end of the seaward face of the work to prevent the sea from breaking through between the work and the bank.

LOWER BURLINGTON.

Lower Burlington, Hants county, is a thriving farming and fishing settlement on the Avon river, 7½ miles from Windsor and about 4 miles by water from Hantsport. It has a population of about 250, chiefly engaged in lumbering and farming. A considerable quantity of pulp is shipped from this place and some fishing is carried on.

During the fiscal year 1914-15, the department expended the sum of $2,500 in the construction of a solid native timber cribwork wharf, 119 feet in length, 16 in width with an "L" 20 feet wide and 16 feet long, giving a face length of 32 feet. The average height is 14 feet.

Work was commenced September 1, and suspended October 31, 1914.

LUNENBURG.

*Dredging.*

Lunenburg, Lunenburg county, is situated on the Atlantic coast, 49 miles west of Halifax by water, with a population of about 4,000. It is the most important fishing port in the Dominion of Canada, the fishing business aggregating about $1,000,000 a year, 200 vessels being engaged, employing 3,000 men.

During the fiscal year 1912-13, 181,709 yards of mud and sand were removed from the harbour at a cost of 27½ cents per yard. This work was performed in front of the wharves and in the immediate vicinity of same, the object being to provide safe anchorage to a depth of 17 feet below L.W.O.S.T.

During the fiscal year 1914-15, dredging was carried on by the department, to provide a depth of 18 feet below L.W.O.S.T. in front of the wharves. The plant employed consisted of the Lobnitz rockbreaker "No. 3" and the dredge *Beacon Bar*, with two scows from dredge "No. 7." The nature of the material removed was mud and rock, the average depth of cutting being 4·1 feet and the area covered 1·2 acres. The place measurement over the area covered was 7,558 yards and the scow measurement 10,600 yards, to the end of the fiscal year. This material was made up of hard pan, broken rock and soft material, as follows:—

| Material. | Place. | Scow. |
|---|---|---|
| Hard pan | 3,428 | 4,600 |
| Broken rock | 3,640 | 5,400 |
| Soft material | 490 | 600 |

Both the hard pan and rock were broken up by the rock-breaker and all the material was removed by the dredge *Beacon Bar*.

The work remaining to be done consists of—

Rock, 13,000 cubic yards, scow measurement.
Mud, 104,500 " " "

Period of operation extended from December 28 to March 31.

McARA'S BROOK.

McAra's brook, Antigonish county, is a small stream entering into the Northumberland strait, 3 miles west of Arisaig.

In 1887, a landing place was made for boats by levelling off a portion of the top of a large rock and constructing a cribwork approach 75 feet in length. The approach was destroyed in 1890 and reconstructed in 1891.

In 1911-12, the sum of $680.57 was expended in reconstructing the top of the cribwork approach and placing 6-inch hardwood sheathing along its seaward face and in the construction of a retaining wall and road from the inner end of the cribwork to the top of the bank which has receded about 30 feet since 1891.

In 1913-14, the sum of $1,483.97 was expended in levelling and removing rock, in building 45 feet of cribwork extension and in securing material for the construction of a further 45 feet concrete extension.

During the fiscal year 1914-15, the sum of $799.47 was expended in constructing a concrete extension to the boat landing, 16 feet in width and 40 feet in line of work to 1½ feet at L.W.S.T. Spring tides rise 5½ feet.

Work was in progress in July, August and November.

### McNAIR'S COVE.

McNair's cove, Antigonish county, is situated on the western side of St. George's bay, about two miles to the southward of Cape George.

This work is fully described on page 41, part IV of the annual report for 1910-11.

In 1911-12, the sum of $1,912.86 was expended in reconstructing a break on the seaward face of the work, 125 feet in length and 4 feet above the level of the covering; in removing ballast on hand to a place of safety, and in securing additional timber and ballast required in the proposed extension to the "L." Depth at outer end of work 11 feet. Spring tides rise 4½ feet.

In 1912-13, the sum of $1,302.06 was expended; $1,056.60 in constructing a timber break, 198 feet in length, 10 feet in width and 5 feet in height on the seaward side, and a brush and stone beach protection work, with a cribwork block at the outer end, to divert a stream on the east side of the breakwater, and $245.46 in renewing sheathing at the outer end of the work.

In 1913-14, the sum of $200 was expended in reconstructing a portion of the structure and renewing some fenders, sheathing and covering.

During the fiscal year 1914-15, the sum of $398.54 was expended in renewing 7 mooring posts, placing about 500 feet b.m. or of 4-inch spruce covering on the central portion of the wharf and in repairing a portion of the seaward face of the work, including bulk heading and reballasting face chambers over a distance of 45 feet.

Work was in progress in September, November and December.

### MABOU BRIDGE.

The village of Mabou, Inverness county, is on the northern side of Mabou river, where it is crossed by a highway bridge at the head of navigation, 4 miles from its entrance into the Gulf of St. Lawrence, and is a station on the Richmond and Inverness Railway.

In order to provide shipping facilities and to accommodate small steamers and vessels, frequenting this shore, during 1904-5-6-7, a native timber pile wharf, 200 feet in length and 45 feet in width over the inner 50 feet, and 20 feet in width for the remaining 150 feet, was constructed by the department immediately below the highway bridge.

During 1914-15, the sum of $2,067 was expended by day labour in widening the narrow portion of the outer end of the old wharf to 45 feet and in the construction of a pile extension thereto 72 feet long and 45 feet wide, but owing to the lack of funds, its outer end could not be fully completed.

### MAITLAND.

Maitland, Hants county, is a village with a population of about 1,500, situated at the entrance to the Shubenacadie river, which empties into Minas Basin, a large estuary of the Bay of Fundy.

*Ferry Wharf.*

To facilitate the crossing of the river, the department expended the sum of $996.76 in the construction of a ferry wharf of cribwork, 170 feet long and 20 wide. In 1898-99, the sum of $202.45 was expended in extending and finishing this work.

*Public Wharf.*

Between the years 1873 and 1876, the sum of $6,342 was expnded in the construction of a public wharf, and since that date an additional sum of $2,142.76 has been expended in repairs to this work.

*Ferry Landing.*

Half a mile distant from this work, at a small village called Maitland Ferry Landing, in the year 1913-14, the department expended the sum of $1,408.42 in the partial construction of a ferry wharf, with a length of 100 feet and a width of 30; 18 feet of this distance is 16 feet high at the outer end, the slip is 4 feet high and 12 wide. The wharf is of pilework, covered with 3 inch planking, and has an approach 78 feet in length from the public highway to the structure.

During the fiscal year 1914-15, the amount of $993.72 was expended in the completion of the ferry wharf begun the previous year. The seaward side, 175 feet in length, with an average height of 12½ feet, and the outer end, 18 feet wide and 16 high, were sheathed with 6 inch hardwood planking. Guards were placed and the approach and slip completed. A shed was also built with a crib foundation 10 by 15 feet. The completed wharf proper is 100 feet by 18, and the slip is 82 feet long and 12 wide. It begins at the outer end at a height of 4 feet above the river bed and runs on a slope to the top of the wharf.

Work commenced October 1; completed November 30, 1914.

MALAGASH.

Malagash, Cumberland county, is situated on the extreme northwest corner of Tatamagouche bay, and is distant from the village of Wallace about 12 miles. It is a scattered and straggling settlement some three miles in length, with a population of about 600. Farming is the chief pursuit of these people, although some perfunctory fishing is conducted along the shore.

The settlement is situated about 6 miles from any wharf, and about 4 miles from any railway station, thus being handicapped greatly as to shipping facilities.

In the fiscal year 1906-7, a wharf was built near the central portion of the settlement. The work was done by contract costing $3,447, independent of inspection. The wharf consists first, of a rock bank approach 36 feet long, 24 feet wide on top, and 9 feet high at the outer end; second, of an alternate block and span cribwork wharf, 280 feet long, 20 feet wide, with the exception of the last 40 feet, which is 40 feet wide, and has a height at the outer end of 16 feet. There is about 7½ feet of water at the end at L.W.O.S.T. During the past fiscal year, $946.85 was expended in effecting partial repairs to this work. Repairs done consist of the rebuilding of the head of the wharf, and the partial repairing of the next two cribs running in shore. This work is of round log cribwork, thoroughly fendered and fastened. Work was commenced on October 5, and completed November 24, 1914.

Spring tides rise here 7 feet, neap 5½ feet.

MALIGNANT COVE.

Malignant Cove, Antigonish county, is on the south-eastern shore of Northumberland strait, 10 miles south-west of Cape George.

In the bight of the cove, separated from the strait by a gravel beach from 100 to 200 feet wide at high water, and at the crest about 4½ feet above that level, lies a pond, fed by a small stream, and a shifting channel connects this pond with the sea.

In 1900-1-2, a channel 30 feet wide at the bottom, 2 feet below low water, was cut through the beach, and crib-work piers on each side of this opening, 60 feet apart and extending 248 feet inward, through the beach, and 90 feet outward to 7 feet at L.W.S., were constructed. These piers were founded at low water, the inner piers are 10 feet wide on top; the outer piers are 16 feet wide for 60 feet and 28 feet wide for 30 feet.

The piers are of round native timber crib-work, full ballasted and their outer ends and channel faces are close-sheathed with 6 inch hardwood plank.

This work is fully described in the report of 1914.

During the fiscal year 1914-15, the sum of $888.81 was expended in completing the 75-foot extension to the eastern pier for wharf accommodation, begun in 1913-14. During heavy storms, late in the fall of 1913, the work settled about 3 feet at the outer end and authority was granted to raise the work to the required height and later to insure it against further settlement, and the work was satisfactorily completed.

Depth at outer end of pier after completing, 8 feet at L.W.S.T.

Work was in progress in July, August and December.

## MARBLE MOUNTAIN.

Marble Mountain, Inverness county, is a settlement on the northern side of West bay, an arm of the Great Bras d'Or lake, about 14 miles to the eastward of the head of the bay.

The place was of very little importance until a few years ago when the extensive limestone quarries there were bought by the Dominion Iron and Steel Company, who employ a large number of men and ship the output of the quarries to Sydney to be used in connection with their smelting works.

During 1906-7-8, a block and span wharf, extending to 15 feet at low water, 185 feet long and 20 feet wide, with an "L" on the northern side of the outer end, was constructed by the department.

During 1909-10, the sum of $834.47 was expended in the construction of a road some 1,050 feet in length and 20 feet in width to connect the wharf with the public road, and in fencing it in with post and wire fencing.

During the year 1913-14, the sum of $231.70 was expended in repairs to the covering of the wharf.

During the year ended March 31, 1915, the sum of $246.47 was expended in the construction of a warehouse 12 by 20 feet on the "L" at the outer end of the wharf.

## MARGAREE HARBOUR.

Margaree Harbour, Inverness county, at the mouth of the Margaree river, is on the west coast of Cape Breton island, about 30 miles northeast of Port Hood. It has a narrow intricate channel through which the tide ran at the rate of four knots, and its entrance was obstructed by a bar of shifting sand over which there was, at times, a depth of only 5 feet at extreme low water.

Expenditures have been made by the department in the construction and maintenance of channel protection and improvement works on the west side of the entrance, and in the construction of beach protection work on the east side.

The works on the west side include works built by the Provincial Government and extended by the department and work of improvement undertaken in 1900-1.

The depth at extreme low water in the channel opposite the west side protection work was found in 1909 to be nowhere less than 10 feet and over a bar outside, not less than 9 feet.

During 1910-11, the sum of $4,200.45 was expended in general repairs to the breakwater and in constructing a 24 by 24 foot block to protect the outer end of the breakwater.

On March 22, 1911, a contract was entered into for the construction of a 100-foot extension to the breakwater, in the sum of $5,300, and the work was satisfactorily completed on August 11 following.

During 1914-15, repairs were made to the breakwater on the western side of the entrance to the harbour, and the sum of $4,031 was expended by the end of the fiscal year in repairing the wrecked outer end of the work and in general repairs and renewals required in other sections of it, consisting in the renewal of floor-stringers, covering, cap-timbers, fenders, sheathing and ballasting.

*Dredging.*

The entrance to the harbour being through banks of shifting sand, easily affected by strong northerly gales, was never good, and for some years it has been gradually filling in until during the spring of 1914, the water became so shallow that small vessels and steamers frequenting the harbour could not enter it. As the district of Margaree depends entirely upon water communications for imports and exports, it became necessary to dredge out the entrance and on August 26, 1914, a contract was entered into with Vivian T. Bartram, of Toronto, for the dredging of a channel 60 feet wide and 1,050 feet long, of which a width of 30 feet was to be dredged to 12 feet at low water, and the balance to a depth of 9 feet at low water. Dredging operations were commenced on August 27, 1914, and were completed on October 27, following.

The quantities of materials removed by dredging and the cost of their removal, are as follows:—

| | |
|---|---|
| Sand, 20,498 cubic yards, scow measurement, at 55 cents. | $11,273 90 |
| Boulders over 2 cubic yards, 42·14 cubic yards in place, at $5 | 210 70 |
| Overcasting, 1,950 cubic yards in place at 36⅔c | 715 00 |
| Dredging bottom old work, 150 cubic yards in place, at $1.10 | 165 00 |
| | $12,364 60 |

The material to be removed consisted of 16,800 cubic yards of sand in situ, and as the quantity removed is 20,498 cubic yards scow measure, the expansion factor was 22·01 per cent.

MARGARETSVILLE.

Margaretsville, Annapolis county, is the most important village on the south shore of the Bay of Fundy, between Digby Gut and Scott's bay; it is 42 miles northeast from the former, 36 miles southwest from the latter and 9 miles north of Middleton, an important station on the Dominion Atlantic railway. It has a population of 500, engaged in fishing and farming.

A pier was begun in 1837, by the Provincial Government. It was taken over by the Department of Public Works in 1871, since which time it has had frequent repairs, renewals, and extensions, a full history of which will be found in the departmental report for 1912-13.

In 1913-14, the sum of $299.99 was expended in repairing and renewing the floor of the east breakwater, and the sum of $100 was expended in effecting similar repairs to the upper part of the main breakwater.

In 1914-15, the sum of $99.02 was expended in emergent repairs to the floor of the main or western breakwater.

MEAT COVE.

Meat Cove, Victoria county, is a small cove on the northern coast of Cape Breton island, about 2 miles southeast from Cape St. Lawrence, the extreme northern part of the island.

The sum of $1,000 was voted for expenditure during 1914-15 in the construction of works for the improvement of the boat-harbour.

Instructions were received for the prosecution of the work by day labour, but owing to the difficulty of obtaining materials during the fishing season, when the whole of the male population of the district is employed, it was considered advisable to procure the materials during the winter and to start the work of construction next spring; of the amount voted, the sum of $537.84 was expended for materials before the end of the fiscal year.

METEGHAN.

Meteghan, Digby county, is situated on the south side of St. Mary's bay, Bay of Fundy, 25 miles north of Yarmouth, 20 miles south of Weymouth, 21 miles south of Meteghan river and 40 miles south of Digby, the county town.

Next to Digby and Yarmouth, Meteghan is the most important settlement on the bay shore, having a population of 1,000, engaged in farming, fishing, lumbering and general trade. The harbour works consist of a breakwater and a landing pier, both of native timber cribwork, and both built between 1837 and 1860, by the Provincial Government and the inhabitants. The pier is 200 feet long and 30 to 40 feet wide. The breakwater is 925 feet, with an "L" of 85 feet at the outer end. Since 1875, numerous expenditures were made by the department in repairs and renewals, of which an account will be found in the departmental report for 1912-13.

In 1913-14, the sum of $2,000 was expended in taking down and rebuilding part of the seaward face of the outer end of the stem of the breakwater, 49 feet long, 24 feet high and 16 feet wide. The upper part of the "L" of the breakwater was partially renewed.

In 1914-15, the sum of $504.54 was expended in bulk-heading and protecting the shoreward end of the stem of the breakwater, adjoining a length of 60 feet that was entirely destroyed by a severe storm in November, 1914.

METEGHAN RIVER.

Meteghan River, Digby county, empties into the Bay of Fundy near the lower end of St. Mary's bay, almost directly opposite Grand Passage. The village near the mouth of the river is 20 miles south of Weymouth, 28 miles north of Yarmouth and 2½ miles north of Meteghan. The population of the place is almost 500, engaged in fishing, farming and lumbering. The works here, which were built before Confederation, presumably at the joint expense of the inhabitants and the Provincial Government, consist of two breakwaters, one on either side of the river mouth, enclosing an area of about three acres, in which, at H.W.O.S.T., is a depth of 10 to 15 feet of water.

Since 1873, numerous expenditures were made by the department, in repairs, extensions and improvements, a full account of which will be found in the departmental reports for 1908-9, 1911-12 and 1912-13.

In 1913-14, the sum of $996.53 was expended in the renewal of the floor of the shore end of the breakwater, for a length of 260 feet, for the full width of the work and a further length of 100 feet for half the width of the work. The renewals comprise planking and stringers.

In 1914-15, the sum of $442.37 was expended in building a block of cribwork, 50 feet long, 10 feet wide and 8 feet high projecting inwards from the shore end of the north breakwater, to check undermining by the sea. Miner repairs were also made to the main or south breakwater.

MIDDLE EAST PUBNICO.

Middle East Pubnico, Yarmouth county, is a thrifty settlement of some 400 to 500 people, engaged in fishing and farming, situate on the east side of Pubnico harbour, 32 miles southeast from the town of Yarmouth.

In 1904-5, the sum of $3,531.67 was expended in constructing a public wharf of pile-work, 250 feet long, 25 feet wide, with an "L" on the outer end, giving a face length of 50 feet and a height of 16 feet. At H.W.O.S.T. the face of the work carries a depth of about 13 feet of water.

Spring tides rise about 14 feet.

In 1907-8, the sum of $300 was expended in sheathing the outer end of the face of the wharf, 55 feet in length, with 5-inch plank, to protect the piles against running ice, and in driving 15 new fender piles along the outer face and north side to replace those broken by ice the previous winter.

In 1914-15, the sum of $150.90 was expended in renewing about 1,000 square feet of the decking, which was much decayed.

MIDDLE RIVER (LOWER).

Middle river, Victoria county, is a large stream emptying into Indian bay, on the northern side of St. Patrick's channel, an arm of the Bras d'Or lakes.

About 5 miles above its mouth, the river flows through alluvial lands, easily acted upon by the strong currents, particularly during freshets, and by opening up new channels, caused great loss of valuable lands.

Since 1903, three shear-dams were constructed along the river at this point, for the purpose of strengthening and confining the course of the river and the works proved successful as far as they went. At the end of the year 1908-9, the lower dam was 1,042 feet, the middle 220 feet and the upper dam 600 feet in length. All these dams consist of pile-work filled in solidly with brush and stone, laid in alternate layers, and protected on the channel face with close sheathing.

During 1909-10, the sum of $1,100 was expended in constructing a low pile-brush and stone dam, 250 feet in length and 10 feet in width in front of the deepest portion of the upper dam, to prevent undermining of the gravel bottom, and during 1911-12, the sum of $493.88 was expended in repairs to the lower dam, constructed during 1909-10.

Out of the amount voted for repairs to shear-dams during 1913-14, the sum of $2,346.34 was expended as follows:—

On the lower dam the sum of $1,199.21 was in the partial reconstruction of 200 lineal feet of pile, brush and stone work, leaving a portion of brush and stone filling incomplete for the want of funds.

On the upper dam, the sum of $1,147.13 in the reconstruction of 240 lineal feet of pile, brush and stone protection to face of dam and in the renewal of 300 cubic yards of brush and stone in the dam itself.

During 1914-15, the sum of $350.64 was expended in filling in the lower dam which was left incomplete during 1913-14, with brush and stone for a distance of about 60 feet.

MIDDLE RIVER (UPPER).

Upper Middle River, Victoria county, is a settlement on the Middle and is situated about 11 miles from and above the mouth of the river.

For the purpose of deflecting the course of the river above the footbridge, where it threatened to leave the old and cut a new channel through valuable intervale lands, during 1907-8-9, the sum of $2,185.15 was expended in the construction of a shear-dam, 400 feet in length, the upper 100 feet consisting of brush and stone and the lower 300 feet of three rows of pilework, 15 feet wide filled in solidly with brush and stone and sheathing on the channel face with plank driven into the bottom.

During 1909-10, the sum of $401.02 was expended in the construction of a short dam above the old dam, to prevent the river from cutting in behind it. The new dam is 90 feet in length, of which the upper end for a distance of 30 feet, is of brush and stone, and the lower 60 feet of pile-work, filled in with brush and stone.

During the year ended March 31, 1912, the sum of $409.95 was expended in the construction of an extension 90 feet in length to the upper dam of piles, brush and stone work.

The sum of $500.50 was expended during the year 1913-14, in protecting the river bank between the upper and lower dams with deposits of brush and stone and in refilling the top of both dams with brush and stone, of which altogether about 500 cubic yards were placed.

During the fiscal year ended March 31, 1915, the sum of $400 was expended in placing additional brush and stone on the river bank between the upper and lower dams over a distance of 375 feet and in a width of 10 feet.

### MILL COVE.

*Dredging.*

Mill Cove, Halifax county, is a small cove on the Dartmouth side of Halifax harbour, situated in the central part of the town, well sheltered, and a number of industries are located at this place.

The object of the work here is to deepen the cove to a depth of 18 feet for the convenience of shipping. During the year 1912-13, 60,243 yards of mud and boulders were moved, and during the year 1913-14, 28,568 yards were removed at a cost of 29 cents per cubic yard. The work was done on a scow measurement basis.

During 1914-15, 5,913¾ yards, scow measurement, were removed, the contractors for this year and the previous years being the Halifax Dredging Company, Ltd. The cost of the work done this year was $1,714.99, the material removed being mud and boulders. Unit price of the contract 29 cents per cubic yard.

The average depth of cutting was 2 feet and the area covered 1·4 acres. The dredge employed was the *Ferguson*. Period of operation extended from May 12 to June 17.

### MILL CREEK.

Mill Creek, Kings county, is a small farming settlement of a couple of hundred, situated on the eastern side of the Basin of Minas, 3 miles south of Blomidon, 4 miles north of Kingsport, the terminus of a branch of the D. A. railway.

About 20 years ago, the inhabitants began the construction of a small pile wharf, 160 feet long and from 20 to 25 feet wide, but funds gave out and the work was left unfinished. Between 1899 and 1911, the department made numerous small expenditures in repairs, renewals and extensions, of which a full description will be found in the departmental reports for 1906-07, 1910-11 and 1912-13.

In 1913-14, the sum of $5,245.96 was expended in extending the breakwater wharf by a new block of substantial crib-work, 92 feet long, 31 feet wide and from 23 to 26 feet high. Repairs were also made to the rest of the work.

In 1914-15, the sum of $4,000 was expended in further extending the work by a block 75 feet long, 31 feet wide and 26 feet high.

MIRA FERRY.

Mira Ferry, at Albert bridge, Cape Breton county, is situated on the Mira river about 5 miles from Mira gut at its mouth, where there is a station of the Sydney and Louisburg railway, and is distant about 12 miles from the city of Sydney. There are several steamers engaged in the passenger and freight traffic and passengers getting off at Albert bridge were landed at an old pier on the main river, where the landing is both difficult and dangerous.

In order to facilitate the landing of freight and passengers, the sum of $1,000 was voted for expenditure during 1913-14, in the construction of a native timber wharf in Burke's cove, where there is no danger of running ice and where a free site and right of way thereunto has been offered to the crown by the Presbyterian Church.

Instructions to proceed with the construction of the proposed work by day labour, were received on June 13, 1913; out of the amount voted, the sum of $476.22 only was expended during the year, in procuring the necessary materials for the construction of the wharf.

During the year 1914-15, the wharf, for which the materials were procured during 1913-14, was completed by day labour at a cost of $694. The wharf is a block and span structure, 100 feet long and 16 feet wide with an outer block, 16 by 30 feet, and extends to 11 feet at low water.

MORDEN.

Morden, Kings county (formerly called French Cross), is a small fishing and farming village of about 150 people, situated on the south shore of the Bay of Fundy, 50 miles northwest of Digby Gut, 9 miles north from Aylesford station on the D. A. railway. A breakwater was begun in 1846, at the joint expense of the inhabitants and the Provincial Government. It is 365 feet long, from 28 to 45 feet wide and from 10 to 26 feet high. It has had many repairs, renewals and extensions, complete details of which will be found in the departmental reports for 1904-5, 1911-12, and 1912-13.

In 1913-14, the sum of $999.27 was expended on the construction of two pieces of cribwork on the west or seaward side of the shore end of the breakwater; one piece, 50 feet long, 11 feet wide and from 12 to 16 feet high, adjoining outwards the piece 42 feet long, built in 1912, and the other piece is 40 feet long, 11 feet wide and 11 feet deep shorewards from the piece built the previous year.

In 1914-15, the sum of $24.50 was expended in replacing a few planks that were washed off by the storm in the late fall of 1914.

MOSHER'S BAY.

Mosher's bay, Lunenburg county, is situated on the east side of the entrance to La Have river, about half a mile west of La Have Iron Bound island. This bay is extensively used by fishermen from all parts of the coast as far as Riverport and as far east as Lower Kingsburg. The population benefited by the proposed work will be about 300, their chief occupations being fishing and farming.

During the fiscal year 1914-15, the department expended the sum of $2,960.50 in procuring material for a breakwater which it is proposed to construct under the 1915-16 appropriations.

The material was secured during the month of March, 1915.

MULGRAVE.

Mulgrave, Guysboro county, is an important transfer station of the Intercolonial railway on the western side of the Strait of Canso.

Dredging was undertaken in order that a waiting berth might be provided to accommodate the new ferry steamship, then under construction, and which was to act as an auxiliary to the present ferry boat.

The area improved by dredging was at one time used as a docking berth for the ferry steamship and is located to the west of the present dock. The material encountered consisted of about one foot of soft mud overlying boulders cemented together by stiff clay and gravel which proved to be extremely difficult to remove. The dredging extended over an area of 16,000 square feet; average depth of cut, 3·4 feet.

The *in situ* quantities removed were as follows: 600 cubic yards of soft mud; 1,300 cubic yards of stiff clay, gravel and boulders; 100 cubic yards of old crib-work. Total dredging performed, 2,000 cubic yards, *in situ*. The scow measurement returns of quantity removed was 2,495 cubic yards; thus we have an average expansion factor of about 24·5 for the aggregate material.

It was necessary to perform 200 cubic yards of overcasting at the inner end of the dock. This quantity was subsequently scowed away.

The work was performed by the departmental dredge *No. 6* from August 6 to August 19.

### NEW HARBOUR.

New Harbour, Guysboro county, is on the southern or Atlantic coast of Nova Scotia, thirty miles to the westward of Canso harbour. It is merely a shallow bay, open to the southeast, at the head of which is the entrance to St. Catharines river, navigable for boats five miles inland.

A contract entered into in May, 1900, for the construction of a breakwater at Black Point on the western side of the bay, was completed September 27, 1900.

The breakwater consisted of a stone embankment, 160 feet in length and 7 feet in average height, between the shore and "Black Rock"; a stone embankment, 89 feet in length and 18 feet in average height, in extension of "Black Rock"; and 160 feet of cribwork 25 feet in width, with creosoted substructure and a talus on the seaward side sloping 3 to 2 from high water. The height of the cribwork, over 15 feet of its width on the seaward side, is 7 feet, and over 10 feet of its width on the inner side, 3 feet 4 inches above extreme high water. The depth, at extreme low water, at the inner and outer ends of the cribwork are respectively 6 feet and 16½ feet. Spring tides rise 6 feet.

During a southerly gale in October, 1900, the outer section of stone embankment was nearly destroyed, the cribwork was slightly damaged and most of the stone in the talus on the seaward side of the cribwork was carried away.

In 1901-2, the sum of $3,693.04 was expended in repairing the cribwork and in constructing a concrete wall, 89 feet in length and 12 feet in width on top and 10 feet in average height, over "Black Rock" and in slight repairs to the embankment.

In 1902-3, the sum of $5,999.77 was expended in repairing 50 feet of the concrete work between "Black Rock" and the cribwork by placing concrete where undermining had taken place and in placing heavy stone (5 to 8 tons), on the seaward side of outer concrete work and cribwork extension.

In 1903-04, the sum of $741.74 was expended in completing the talus on the seaward side of the extension, in repairing roadway and placing a second covering over the outer section of the crib-work extension and strengthening the stone embankment between the shore and "Black Rock."

In 1906-7, the sum of $2,125.74 was expended in repairing the stone embankment between "Black Rock" and the shore; in placing additional stone in the talus on the seaward side of the extension, and sorting and piling, at West Arichat, the creosoted timber required in the construction of a proposed 24 by 24 foot block, to be placed in 12 feet at low water against the inner face of the cribwork extension.

In 1907-08, the sum of $1,299.16 was expended in completing repairs to the seaward face of the breakwater and in procuring the creosoted and native timber and other materials required to construct the 24 by 24 foot block undertaken in 1906-7.

In 1910-11, the sum of $914.83 was expended in general repairs to the stone embankment between the shore and "Black Rock," including the repairing and setting in concrete the covering stone that had been washed out.

During the fiscal year 1914-15, the sum of $992.46 was expended in cutting down and reconstructing part of seaward face of concrete wall between stone embankment and cribwork extension and in refilling with stone and concrete, a break in the embankment.

Work was in progress in August, September, October and November.

NEWPORT LANDING.

Newport Landing, Hants county, is situated on the east bank of the Avon river, about two miles below the town of Windsor, on an isolated neck of land between the St. Croix river on the north and the Kennetcook river on the south, a distance by land from Windsor of 14 miles. The nearest railway station is Brooklyn, about six miles distant. It is a rich agricultural district with a population of about 500. Most of the trade of the place is carried on with the town of Windsor.

In the fiscal year 1904-5, the sum of $1,665.28 was expended in purchasing the necessary timber and partially constructing a public wharf, which was completed in the year 1905-6, with an expenditure of $3,348.72. The wharf was built 240 feet long, 35 wide and 20 high, at the outer end. In the fiscal year 1912-13, the sum of $61.87 was expended in temporary repairs, such as renewal of some planking, fenders, etc.

During the fiscal year 1914-15, the sum of $3,487.46 was expended in building an extension to the wharf. The extension measures 40 feet in length by 35 in width, and with a face length of 37 feet on account of the face not being built at right angles to the side of the work. A slip was placed in the centre of the wharf, 8½ feet from the top and running 10 feet back. The work was constructed in solid native timber cribwork.

Work commenced May 19 and completed August 10, 1914.

NOEL.

Noel, Hants county, is a post village with a population of about 300, engaged chiefly in farming and fishing. It is 13 miles west of Maitland and 32 miles west of Shubenacadie, the nearest station on the Intercolonial railway. It has plaster quarries in the near vicinity and plaster is shipped to the United States each year.

This work is fully described in the report of 1914.

During the fiscal year 1914-15, the sum of $1,499.91 was expended in the completion of the extension to the wharf, and making some miscellaneous repairs. The extension completed is of pilework, measuring 80 feet in length, 34 in width and with an average height of 16 feet. Repairs to the sheathing were made, guards and some new mooring posts were placed, 30 feet of the graded approach was repaired and the approach was newly gravelled. The completed structure as it now stands is 213 feet long by 58 in width, with an "L" 41 feet in length by 72 in width, giving a face length of 102 feet.

Work was commenced August 20, and completed November 24, 1914.

NORTH BELLEVILLE.

North Belleville, Yarmouth county, is a settlement of about 150 people, engaged in farming, lumbering, and general trade. It is 11 miles east of the town of Yarmouth and the settlement is scattered around the extreme north end of Eel lake.

In 1914-15, the department expended the sum of $120.60 in purchasing timber for the construction of a small public wharf. Delay in the purchase of the necessary land for road approach and site, and in the purchase of the timber, made it impossible to begin the construction of the work before the end of the fiscal year.

NORTH GUT.

North Gut, St. Ann's, Victoria county, is a local name of the northwestern arm of the head of St. Ann's harbour, a fine basin seven miles in length and two miles in width, situated at the head of St. Ann's bay, on the eastern coast of the island of Cape Breton.

A block and span wharf extending to 7½ feet at low water, was constructed by the department during 1904-5. It is 122½ feet long and 20 feet wide with an "L" at the outer end, 20 by 20 feet, the blocks consisting entirely of round native cribwork, laid open-faced, securely ballasted and fendered.

During 1913-14, the sum of $149.48 was expended in the renewal of covering, where necessary, and during 1914-15, the sum of $299.84 was expended by day labour in completing the renewal of the covering and cap-timbers and in the construction of a freight-shed, 10 by 12 feet, on the outer end of the wharf.

OGDEN'S POND.

Ogden's Pond, Antigonish county, is on the western shore of St. George's bay, about thirteen miles south from Cape George, and nine miles north from the town of Antigonish. It is a small sheet of water, about 100 acres in extent, separated from the bay by a sand beach of from 130 to 250 feet in width.

For the purpose of rendering the pond, which has a depth of over 10 feet at low water, accessible to boat and small craft, during 1900-1-2, a channel 30 feet wide and 825 feet long was cut through the beach and the flat inside down to a depth of about 1½ feet below low water, and a channel protection work, 350 feet in length, was constructed on the northern side of the entrance. The work consisted of: a brush and stone embankment 70 feet long and 8 feet wide on top, with sides sloping ½ to 1; a pile, brush and stone work, 260 feet long and 10 feet wide, close-sheathed on the seaward face, and of a round timber cribwork block at the outer end, 20 by 20 feet, with creosoted timber substructure and close-sheathed on all outer faces.

During the year 1902-03, the sum of $649.87 was expended in repairing and levelling up the outer block; in protecting its base with brush and stone, and in replacing stone in the pile, brush and stone work, which had been washed out by the sea.

On November 11, 1902, during a terrific northwest gale, the brush and stone in the work were washed away by the sea, and afterwards, for a distance of 130 feet, the piles were broken off and washed away, leaving the cribwork block at the outer end uninjured.

In 1903-04, the sum of $1,449.87 was expended in replacing the damaged pile-work, in refilling pile-work, in placing a covering over all and in securing a further supply of ballast.

Up to June 30, 1905, the sum of $499.86 was expended in constructing pile, brush and stone work on the pond side of the entrance to confine the tidal streams.

In 1911-12, the sum of $170.55 was expended in reballasting cribwork and repairs to pile, brush and stonework.

In 1913-14, the sum of $542.64 was expended in repairs to channel pier, hand dredging and the building of further brush and stone protection work on the south side of the entrance.

During the fiscal year 1914-15, the sum of $1,886.30 was expended in the construction of an extension to the breakwater, 22 feet by 35 feet in line of work, built of round timber cribwork with creosoted timber substructure sheathed on three faces with 4-inch creosoted and hardwood sheathing and a timber break along the seaward face 35 feet in length and 3 feet 8 inches above the level of the top of the covering. Depth at outer end of work, 4 feet. Spring tides rise 6 feet.

Work was in progress in August, September, October, November and December.

OSBORNES.

Osbornes (Cow Bay), Halifax county, is a fishing and farming settlement ten miles east of Halifax, on the Dartmouth side of the harbour. It has a population of about 150.

Of the 1908-09 appropriation of $4,000 for Cow Bay, one half, $2,000, was diverted and authorized to be expended in the construction of a breakwater at Osbornes, on the northern side of Cow Bay, about a mile from Cow Bay Run, and the sum of $550.84 was expended in timber. The lateness of the season at which the division was authorized, prevented construction from being undertaken. During the year 1909-10, the sum of $1,193.55 was expended in constructing a breakwater. The work is of native timber, crib-work 20 feet wide, 100 feet long and 3 feet high at the inner end, and 18 feet high at the outer end, where there is a depth of water of 6 feet at low tide. It is partially sheathed on the seaward side and outer end, and has a break 2½ feet high. In the year 1913-14, the sum of $2,474.01 was expended in the purchase of timber in readiness for the construction of an extension to the breakwater under the 1914-15 appropriations.

During 1914-15, an extension was built, 141 feet in length and 20 in width with an "L" 40 by 21 feet having an average depth of 18 feet. This work was constructed of native timber cribwork filled with stone, and has a timber break along the seaward face 3 feet high.

Work commenced June 22, completed December 30, 1914.

OWL'S HEAD.

Owl's Head, Halifax county, is a fishing settlement on the Atlantic coast, immediately west of the entrance to Ship Harbour, 50 miles east of the city of Halifax. Population of the place within a radius of about one mile is about 300, dependent almost wholly upon the fisheries. Value of the annual catch is about $17,000.

During the year 1908-09, $1,943.08 was expended in the partial construction of a public wharf and in the purchase of timber for its completion. During the year 1909-10, the sum of $494.96 was spent in completing the wharf. Its dimensions then were 220 feet by 20, with a height of from 5 feet at the shore end to 15 at the outer end, substantially built of solid stone-filled cribwork. During the fiscal year 1910-11, the sum of $843.20 was expended in the construction of an "L" to the wharf, 35 feet long by 25 wide and about 22 feet in height at the outer end.

During the fiscal year 1914-15, the sum of $1,799.97 was expended in the construction of an extension to this work 28 feet long and 25 feet wide with an average height of 20 feet, and giving a depth of 10 feet at L.W.O.S.T. A new freight shed was also built on this extension, 14 by 16 feet.

Work was started September 11, 1914, and completed January 11, 1915.

PARKER'S COVE.

Parker's Cove, Annapolis county, is a small indentation in the southeast shore of the Bay of Fundy, 15 miles northwest of Digby Gut, and 7 miles north of Annapolis, the county town. The population of the settlement is about 250, engaged in fishing and farming.

In 1883-84, the department constructed a small cribwork breakwater, 200 feet long, 23½ feet to 26 feet wide on top and at the outer end 16 feet high, where, at high tide, there was a depth of about 11 feet of water.

From 1900 to 1914, the department made numerous expenditures, of which a full account will be found in the reports for 1907-08, 1911-12 and 1913-14.

In 1914-15, the department expended the sum of $6,480, by contract, in building an extension 100 feet long, to the western breakwater. The new block, which is of substantial cribwork, the lower part sheathed with creosoted timber, is from 24 to 30 feet wide on top and from 22 to 32 feet high. Amount of contract, $6,480, and contractor, R. H. MacDonald. The work was begun about 1st May, and finished on 15th August, 1914.

PARRSBORO'.

Parrsboro' is situated on the northwest shore of the Basin of Minas, with a population of about 2,800, the chief industry being lumbering. Considerable agriculture is prosecuted here, whilst the Dominion Coal Company have a shipping port where coal from the mines of Spring Hill find an outlet. The Trade and Navigation Returns show the total tonnage inwards of 48,546, comprising the tonnage of 123 vessels, whilst outwards there were 151 vessels cleared, with a total tonnage of 56,890. Lumber to the extent of thirty million feet is shipped annually, whilst about sixty thousand tons of coal each year are shipped from this port. Parrsboro' is the third port in the Province of Nova Scotia as to magnitude of shipping, Halifax and Sydney alone exceeding it. The value of the shipping is probably in excess of $500,000

The object of the work was to provide a clear channel from low water mark to the Dominion Coal Company's pier, which marks the extreme points in the length of the harbour. The total length of the channel is about 3,200 feet. There were five different places where dredging was required. During the past fiscal year, 1,824 cubic yards of material were removed, by day labour, horses and carts being employed. This work was commenced on May 18 and completed on September 26, 1914. The cost of the work was $4,882.30, making the total cost per yard $1.01½. In the portion yet requiring removal, place measurement shows 1,540 cubic yards of material. The material consists of a mixture of mud and clay and, in places, a top layer ranging from 6 to 14 inches in thickness of cobblestones, pebbles, etc. At the lower portion of the channel sand and gravel with an overlying stratum of cobblestones is the chief material and this is liable to shift from time to time, so that small obstructions in the shape of mounds from one foot to three feet in height are liable to be formed.

PEGGY'S COVE.

Peggy's Cove, at the entrance to St. Margaret's bay, is on the east side, 30 miles from Halifax. It has a population of about 200, engaged chiefly in fishing.

During the fiscal year 1912-13, the department expended the sum of $400 in the construction of a sea wall, 70 feet in length and 6 in height, the material used being loose boulders. At this place there is a small harbour, and not far from the main entrance there is an inlet through which the sea used to break in rough weather and endanger the shipping in the harbour.

During the season of 1914-15, the sum of $1,430.86 was expended in the partial construction of a stone breakwater across the mouth of this inlet. The work is 64 feet long on top, has an average width of 14 feet and varies from 0 to 12 feet at the highest part. The work is built of granite, the outside walls being 3 feet in thickness and set in Portland cement mortar, the work being all hand-laid. When complete, the work will be 3 feet higher than at present and will prove a great boon to the fishermen at this place.

Work commenced August 1, and was completed November 30, 1914.

PEMBROKE.

Pembroke, Hants county, is a small farming and lumbering settlement of about 175 inhabitants, situated on the south shore of Minas basin, 9 miles from Cheverie and 3 miles west of Walton. The lumbering industry consists of the annual shipment

of about 3 million feet of deals and from 5,000 to 10,000 pieces of piling. As an aid to local business and as a protection to vessels loading and discharging freight here, the department awarded a contract for the sum of $7,970 for the construction of a breakwater during the fiscal year 1904-5. The work, which is entirely detached from the shore, is 200 feet long, by 20 wide on top and 22 in height. On the seaward face it is plumb and sheathed with 6-inch timber, having a break 5 feet high on the seaward side. On the shoreward side it batters 3 inches to the foot. The work is substantially built of round log cribwork filled solid with stone. The total cost of the work was $8,593.55.

During the fiscal year 1914-15, the sum of $974.86 was expended in repairs, consisting of new floor stringers, planking, three new mooring posts and miscellaneous repairs.

Work commenced May 6 and completed August 25, 1914.

PEREAUX.

Pereaux, Kings county, is a rich and prosperous agricultural district, with a population of some 300 to 400, situated on the west side of the Basin of Minas, three miles north of Kingsport, and five miles south of Cape Blomidon. From Kingsport to Cape Blomidon is a thickly settled and fertile agricultural district.

In 1901-2, the sum of $1,991.95 was expended in building a pile-work wharf, which, owing to the piles not having been properly driven, was destroyed by exceptionally heavy ice in the winter of 1904-5.

In 1906-7-8-9, the sum of $3,704.48 was expended in rebuilding the structure in block and span. It is 160 feet long, 20 feet wide on top, and from 12 to 20 feet high, consisting of 8 blocks of cribwork and 7 spans.

In 1914-15, the sum of $200 was expended in repairs and renewals to the floor of the wharf.

PETIT DE GRAT.

Petit de Grat, Richmond county, is a large fishing settlement situated on both sides of Petit de Grat inlet which separates Madame from Petit de Grat island. The main entrance is at the southern end from the Atlantic; the northern entrance from Rocky bay, is obstructed by outer and inner bars, through which passages for boats at low water were opened by the department.

*Dredging.*

The object to be obtained by dredging was the deepening of the main channel and the approaches to the different wharfs in the locality, to permit the small fishing vessels used in the fisheries to enter and leave at all times of tide.

During 1909-10, Messrs. Beazley Bros. of Halifax, improved, by dredging, the approaches to Jean's, Duff's and Comeau's wharfs, removing some 10,945 cubic yards of mud and 45¾ cubic yards of rock.

On July 11, 1910, a contract was entered into with the W. J. Poupore Co., Ltd., of Montreal, to dredge 35,000 cubic yards, scow measurement, at 55 cents per cubic yard. The contract expired on December 19, 1910, and, as no work was done under this contract, it was extended to December 19, 1911.

On May 29, 1911, the dredge *Prince Guy* commenced operations and continued until July 12, removing 6,530 cubic yards of hard-pan and small boulders, but as the plant was found too light for the work required, the dredge was dismantled and another dredge the *Pontiac*, was placed in commission to take her place. This dredge commenced operations on July 31, and continued until August 12, when she was burnt and sank at her moorings. During this period, the dredge removed some 3,900 cubic yards of hard-pan.

On May 9, 1912, the extension of the contract with the W. J. Poupore Co., Ltd.,

was extended by an Order in Council and on October 11, the Company's dredge *King Edward* resumed the work and the original contract was completed. The material removed during 1912-13, consisted of 22,031 cubic yards, scow measure of clay and small boulders, and of 281½ cubic yards of boulders containing 2 cubic yards and over.

On September 22, 1913, a contract was entered into with the Coastal Dredging Co., Ltd., for the removal of 22,400 cubic yards, scow measurement, of clay and sand, at the rate of 54 cents per cubic yard, scow measure, to complete the improvement of the main channel and the approaches to Duff's, Comeau's and Martell's wharfs, to a depth of 12 feet at low water.

Dredging operations were commenced on November 29, 1913, and continued until January 12, 1914, when, owing to the formation of ice, they were suspended for the season. During that period, the approach to Comeau's wharf was completed and the approach to Martell's wharf was about half done, and the quantities of material removed consisted of 9,583 cubic yards, scow measure, of clay and sand, and of 13 cubic yards of boulders, containing 2 cubic yards and over.

Operations were resumed on June 6, 1914, and continued until July 27 following, when the work under contract was satisfactorily completed.

The materials removed during the fiscal year ended March 31, 1915, and the cost of their removal, are as follows:—

| | |
|---|---|
| Sand and clay, 12,844 cubic yards scow measure at 54 cents.. | $6,935.76 |
| Boulders of 2 cubic yards and over, 10½ *in situ* at $5.. .. .. | 52.50 |
| Overcasting, 775 cubic yards *in situ* at 36 cents.. .. .. .. .. | 279.00 |
| | $7,267.26 |

The material to be removed during 1914-15, consisted of 9,400 cubic yards of clay and sand in place, and as the quantity removed is 12,844 cubic yards, scow measure, the expansion factor is 36·64 per cent.

The whole of the dredging was done to depths of not less than 12 feet at low water springs, and the work as completed is as follows:—

1. The main channel from its southern entrance to Duff's wharf at the head of the harbour, for a distance of about 1,200 feet was dredged to a width of from 80 to 120 feet.

2. The approach to Jean's wharf on the western side of the entrance for a distance of 300 feet was dredged to a width of 135 feet.

3. The channel to Comeau's and Martell's wharfs on the eastern side of the harbour for a distance of 500 feet was dredged to a width of 50 feet, and basins about 300 by 200 feet, and 250 by 150 feet were dredged respectively in front of Comeau's and Martell's wharves.

### PICKET PIER.

Picket Pier, Kings county, so-called, is situated on the south side of the mouth of the Habitant river, two miles below the village of Canning, and at the lower end of the village of Canard. The wharf was begun in 1845 by the inhabitants, aided by the Provincial Government. Since 1878, the department has made numerous small expenditures in repairs and renewals, of which a full account will be found in the departmental report for 1904-5.

In 1912-13, the sum of $150.36 was expended in renewing about 1,700 square feet of the wharf covering and the replacing of about 40 tons of ballast.

In 1914-15, the sum of $1,000 was expended in extensive repairs and renewals to the floor.

PICTOU ISLAND.

Pictou Island, Pictou county, is situated in the Northumberland strait about 10 miles northeast of the entrance to Pictou harbour.

There were two wharves on the south side of the island; one near the west end, known as the "West Wharf," and one near the centre, known as the "East Wharf."

The west wharf is 324 feet in length and 20 feet in width (with the exception of the inner 55 feet, which is only 12 feet in width), and has an "L" on east side of the outer end, 60 by 30 feet. The depth at extreme low water at the outer end, originally 4 feet 6 inches, is now only 1 foot.

The east wharf, originally 328 feet in length and 20 feet in width, with a depth at extreme low water at the outer end, of 4 feet 9 inches, was damaged in 1906 and has since been destroyed.

In November, 1909, the sum of $6 was expended in transferring some planks to the island and repairing the covering of the west wharf.

In 1910-11, the sum of $1,148.75 was expended in completing the renewal of top work at the west wharf from the inner end outward, with the exception of placing about 400 cubic yards of ballast.

In 1913-14, the sum of $701.87 was expended in repairing and strengthening the outer end of the west wharf, including the reconstruction of the cribwork block at the southwest corner, renewing some sheathing and covering and re-ballasting some empty face-chambers.

During the fiscal year 1914-15, the sum of $1,200 was expended in reconstructing with native timber, 80 feet of the cribwork three tiers in depth, placing new stringers, covering and guard-rail on same, in sheathing and fendering 256 feet of the west and 116 feet of the eastern sides of the wharf and placing about 80 cubic yards of ballast in some of the bays over the outer portion of the work.

Work was in progress in July, August and September.

PLEASANT BAY.

Pleasant Bay, Inverness county, is on the western coast of Cape Breton island, 24 miles north of Cheticamp and about midway between that place and Cape St. Lawrence.

A contract was entered into on January 29, 1906, for the construction of a wharf for the sum of $7,500. The contract called for a continuous cribwork structure, 210 feet in length and from 16 to 20 feet in width with an "L" at the outer end 20 by 20 feet, creosoted to half tide, fully ballasted and close-fendered on both sides and at the outer end.

During the year 1905-6, the materials required in the construction of the wharf, with the exception of the ballast, were delivered. The contractor commenced the construction of the cribwork early in June, 1905, but up to the end of that month no work had been placed.

During the fiscal year ended March 31, 1907, the work under contract was completed and extra work, costing $150, performed. The extra work consisted in the construction of a bridge, on the right of way leading to the wharf, with brush and stone and framework abutments, 12 feet long, 8 feet wide and 10 feet in height, placed 10 feet apart.

During 1912-13, the sum of $1,182.67 was expended in the renewal of top of bridge in the approach to wharf, the inner block of wharf was rebuilt, the hardwood fenders and sheathing around the outer end were renewed, steel plates were placed around the three outer corners and the road approach to the wharf was repaired and improved.

The sum of $250 was expended during 1913-14, in repairing the outer end of the wharf, which was badly damaged during the severe gale of December 30, 1912, and in raising and repairing the road approach which had been washed out during that gale.

During 1914-15, the sum of $120 was expended by day labour in re-ballasting the outer end of the wharf and in excavating the bank at the sheltered side of the inner end of the wharf to make additional room for the hauling up of fishing boats.

PORT AU PIQUE.

Port au Pique, Colchester county, is a thriving farming and lumbering settlement of about 250 inhabitants situated on the north shore of Minas basin, about 8 miles west of Great Village, and 6 miles east of Bass River.

Previous to the construction of the wharf, vessels coming to either load or discharge had to lie aground on the beach where they could be reached by teams at low water. This was a dangerous practice and resulted in the destruction of several vessels in the course of a few years. To encourage and develop local trade, and for the convenience of shipping, the department, in 1903-04, expended $543.62 in the purchase and delivery of material for the purpose of constructing a suitable wharf. In 1904-05, the sum of $1,884.23 was expended in the construction of the same. The work is of pile-work, 165 feet long by 25 wide with an "L" 20 by 35 feet, giving a face length of 55 feet with a height of 27 feet and depth of water at H.W.O.S.T. of 23 feet. A shed was constructed on the "L," measuring 10 by 12 feet.

During the fiscal year 1914-15, the sum of $749.37 was expended in making general repairs, consisting of replanking, placing new floor stringers, guard rail and fenders, also some new braces.

Work commenced June 6, and was completed July 30, 1914.

PORT BECKERTON.

Beckerton or Port Beckerton, Guysborough county, is a harbour on the southern coast of Nova Scotia, about midway between Indian and Country harbours, and about five and a half miles distant from the entrance of each.

In 1904-05 and 1905-06, the sum of $4,831.93 was expended in completing a wharf, roadway and warehouse.

The wharf is a block and span structure extending 190 feet to 12 feet at low water and consists of an inner block, 40 by 20 feet, 4 intermediate blocks, 18 by 20 feet, and a head block, 24 feet in line of work by 50 feet. Spring tides rise 6 feet.

In 1907-08, the sum of $8 was expended in additional fencing.

In 1913-14, the sum of $450.44 was expended in close-piling the seaward face of the two outer spans, in full ballasting the outer bays of the head-crib and in renewing fenders, guard-rails and some covering.

During the fiscal year 1914-15, the sum of $23.75 was expended in constructing a wire fence with posts placed 15 feet apart, between the end of the public road and the wharf, a distance of 450 feet.

Work was in progress during the month of May.

PORT CLYDE.

Port Clyde, Shelburne county, is situated at the mouth of the Clyde river, about 15 miles west south-west of Shelburne town. It is also located at the northern end of Cape Negro harbour. Port Clyde itself is a small village of about 400 people, situated along the western side of the harbour front, for a distance of about 2½ miles. Two miles above it is situated Clyde village, another settlement of about 300 people. The chief industries are lumbering and fishing. During the past four years, the Clyde River Pulp Company have been operating at Clyde, three miles above the mouth of the river; their output is in the vicinity of 3,500 tons per year.

This work is fully described in the report of 1914.

During the past fiscal year, the work done was the construction of an inner crib on the head of the wharf, 30 feet by 20 feet, and a freight shed, 24 feet long by 16 feet wide, and the whole work is now completed. Spring tides rise 8 feet, neap 5½ feet.

PORTER'S LAKE.

The works at this place are fully described in the report of 1913-14.

During the fiscal year 1914-15, the sum of $199.27 was expended in opening and keeping open the old outlet; and the sum of $100.05 in removing some stone from the edge of the bank of the canal.

PORT HAWKESBURY.

Port Hawkesbury, Inverness county, is an incorporated town situated on the eastern side of the Strait of Canso, one mile north of Point Tupper, and is a station on the Inverness and Richmond railway.

*Dredging.*

The department some years ago, acquired an old wharf property and repaired and extended the wharf out to a depth of 18 feet at low water. The public wharf is a regular calling place for the steamers of the Plant line, plying semi-weekly between Boston, U.S., and Charlottetown, P.E.I., and as it was found that the available depth of water at the outer end of the wharf was not sufficient to accommodate some of the steamers calling at all times of tide, the departmental dredge *Cape Breton* was detailed to Hawkesbury to effect the necessary improvement.

The dredge commenced operations on June 17, 1912, and completed the work on July 16 following, and removed some 13,800 cubic yards, scow measure, of hard-pan, boulders and layer rock.

The work performed consists in dredging to 21 feet at low water, from the outer face of the wharf and 200 feet north of it, to improve the approach, and in dredging a turning basin on the northern face of the outer end of the wharf to 19 feet at low water, 200 feet long and 200 feet wide at outer end and 50 feet wide at inner end.

In order to improve the depth of water on the southern side of the wharf, which is largely used during the summer season by schooners and fishing vessels for the landing of fish and for the taking in of supplies, or for refitting, the departmental dredge *Cape Breton* was detailed for the purpose during 1914-15.

Operations were commenced on July 23, 1914, and were satisfactorily completed on August 5, following. During that period, a quantity of 210 cubic yards of material in place, was overcast and a quantity of 3,465 cubic yards, scow measure, of clay, stone and gravel was removed and as the amount of material removed was 2,500 cubic yards in place, the expansion factor was found to be 38·6 per cent.

The work performed during the year ended March 31, 1915, was as follows:—

From the inner face of the "L" of the wharf, inwards for a distance of 160 feet and in a width of 100 feet, dredging was done to a depth of 15 feet at low water springs; for a further distance of about 100 feet inwards, for a width of 80 feet, the bottom was dredged to from 15 feet at the outer end decreasing gradually to 10 feet at low water springs, at the inner end.

As the only shoaling to which the dredged area is subjected, is from the land-wash, the improvement made by dredging will prove of an almost permanent nature.

PORT HOOD.

Port Hood, the shiretown of the county of Inverness, is situated on the western coast of Cape Breton island, at a point about 20 miles to be northward of the northern entrance to the Strait of Canso.

A wharf commenced here by the Provincial Government, during 1865, came under the charge of the Federal Government in 1871. The original work was extended, repaired and improved by the Department of Public Works at different times, but owing to its being constructed entirely of native timber, the substructure was weakened by the ravages of the teredo and it was found impossible to keep the work in proper repair.

During a terrific gale on December 20, 1912, the outer end of the wharf was badly wrecked, and as this was the only part of the wharf at which steamers and vessels could land, it became necessary to provide landing facilities, and in order to do so, and to prevent further damage to the wrecked outer end, during 1913-14, a cribwork block, 100 feet long and 20 feet wide, sheathed all around with creosoted sheathing, was constructed along the northern face of the outer end.

The sum of $5,000 was voted for expenditure during 1914-15, in the construction of a new cribwork block, 60 feet long and 20 feet wide, along the outer end face of the damaged work, but as the site was covered with heaps of washed out ballast mixed with old timber, it was deemed advisable to dredge out the foundation for the block and the area outside of and around it, to a depth of 12 feet at low water spring tides.

The departmental dredge *Cape Bretan* commenced operations on August 29, 1914, and completed the work on October 10 following, and during that period a quantity of 1,130 cubic yards of material in place was overcast and 4,335 cubic yards, scow measure, of ballast, old timber and sand were removed, and as the quantity of the material removed, in place, was 3,200 cubic yards, the expansion factor is 35·47 per cent.

The dredging was done over an area of about 35,000 square feet.

PORT MAITLAND.

Port Maitland, Yarmouth county, is a prosperous and important fishing and farming village, with a population of about 600, situated on the southeast side of the mouth of the Bay of Fundy, 12 miles north of the county town of Yarmouth.

The harbour works were begun about the year 1859 by the Provincial Government. They consist of an eastern and a western or main breakwater or cribwork. The former is 400 feet long by some 20 feet wide, and the latter 500 feet long, 22 to 35 feet wide, with a return 54 feet long, 24 feet wide and 27 feet high, along which there is a depth of water of 19 feet at H.W.O.S.T. The breakwaters or piers inclose between them a snug high water harbour of two and a quarter acres in extent.

In 1873-4, the department raised and extended the eastern breakwater, and has since maintained and improved the works. Details of expenditures incurred and work done may be found in the annual report for 1904-05 and 1910-11.

In 1913-14, the small sum of $47.17 was expended in emergent repairs to the floor of the breakwater which was damaged by the gale of January 4, 1913.

In 1914-15, the sum of $800 was expended in miscellaneous and general repairs and renewals to the sheathing and floor of the south or main breakwater.

PORT PHILIP.

Port Howe, or Port Philip, Cumberland county, as it is commonly called, is situated about 4 miles west by south of Pugwash, and is a straggling settlement from three to four miles in length, with a population of about 500 in the district. The chief occupation of these people is farming, although some small interests are engaged in lumbering and fishing.

The site of the wharf is at River Philip bridge, being located along the flats bordering on the channel and running as near parallel to it as possible. Much hay, tan-bark, etc., has, in the past, been loaded here, and the necessity for a wharf for the better handling of such commodities was self apparent. In the fiscal year 1903-1904, the department, at an expenditure of practically $2,000, constructed a wharf, which was repaired during the past fiscal year.

This wharf consists of three blocks of cribwork, each 225 feet long and 20 feet wide on top, and 3 spans, the first being 12 feet long, the other two 15 feet long and all 20 feet wide on top. Besides these cribs and spans the centre crib has attached to it another crib 22 feet long and 20 feet wide, which makes that portion of the work 40 feet wide. The height of the wharf on the outer side is 23 feet average, and 14 feet on the inner side.

The repairs to this wharf consisted of replanking it, replacing about 20 new fenders, and partially repairing the outside crib. It was commenced on September 25, and completed on October 13, 1914. Spring tides rise here 7 feet, neap 4 feet.

PORTUGUESE COVE.

Portuguese Cove, Halifax county, is a small fishing village with a population of about 600, wholly dependent upon the fishing industry. It is situated about six miles from the city of Halifax on the western side of the harbour.

In the fiscal year 1901-02, the department expended the sum of $199.88 in placing some boat skids to enable the fishermen to haul their boats up onto the beach in stress of weather. In 1907-08, the sum of $397.92 was expended in removing rocks and boulders from the channel entrance of the little harbour.

In 1908-09, the sum of $10,000 was expended under contract in the construction of a breakwater for the protection of the fishing fleet. The work is of cribwork construction and provided on the seaward side with a break. It has a length of 217 feet, the shoreward 117 being 20 feet wide and the outer 100 feet being 30 feet wide, and the outer end the work is 21 feet high.

In the fiscal year 1913-14, the sum of $151.03 was expended in renewals and repairs to the skidway at this place.

In the fiscal year 1914-15, the work was completed. The work is now about 137 feet long by about 87 wide at the shore end and 25 wide at L.W.O.S.T. New ties were laid down with longitudinals placed thereon, on top of which crosspieces were placed for skidding the boats. The amount expended in 1914-15 was $398.54.

Work commenced April 27; completed May 19, 1914.

PORT WADE.

Port Wade, Annapolis county (in departmental records prior to 1911, called Victoria Beach), is situated on the north side of the Annapolis Basin, 13 miles southwest of Granville Ferry, which is directly opposite the town of Annapolis; it is 4 miles northeast from the town of Digby and about 1½ miles to the northeast of the entrance of Digby Gut. It is the southern terminus of the Middleton and Port Wade Railway built some five years ago, 50 miles long, and now part of the Halifax and South-Western system.

In 1904-05, a large pilework pier was built by the Department, by contract, at a total cost of about $95,000. A description of the work with subsequent expenditures in petty repairs will be found in the departmental report of 1911-12.

In 1912-13, the sum of $226.76 was expended in fastening the lower 70 feet in length of the inclined slip and the replacing of a number of stringers and planking broken by ice. A few planks in the deck of the pier were also renewed.

In 1914-15, the sum of $4,000 was expended in extensive repairs and renewals to the floor of the pier.

PUGWASH.

Pugwash, Cumberland county, is a town of about 1,000 people, situated on the Straits of Northumberland, about 8 miles from Wallace Harbour. It is a large shipping port, particularly of lumber, the output of which, during the last 8 years, has

averaged about 25 millions feet, all of which has been shipped from our wharfs. During the past fiscal year, repairs costing $1,700.04 were made upon the two wharfs owned by this department. A sluiceway, or loading place for small vessels, was cut in the new wharf, whilst the old wharf, for its entire length, was retopped, a portion of the cribwork renewed and about 1,500 tons of ballast added. The under section of this wharf has been in bad condition for the last three years, so that considerable ballast has gone out of the work, causing greater renewals than was anticipated. For this purpose, an additional $500 was granted, which was to be paid out of the accounts for the fiscal year 1915-16.

The old wharf is 145 feet long, 50 feet wide, and has 16 feet of water at its lower end at L.W.O.S.T. It is constructed of continuous round-log cribwork. The new wharf is 334 feet long, consisting of a rock bank 31 feet long, 24 feet wide, and continuous cribwork 303 feet long, 20 feet wide with the exception of the last 28 feet which is 40 feet wide. It has a depth of water of 17 feet at L.W.O.S.T. The sluiceway in this wharf is 4 feet deep, 36 feet long on the shoreward side, 15 feet long on the outer side and an 18-foot loading platform. Work was commenced on June 15, and completed October 31, 1914. Spring tides rise 6½ feet, neap 5 feet.

### RAINY COVE.

Rainy Cove, Hants county, is situated in the district of Pembroke. It is a small farming and lumbering centre, and the population benefited by the work will be 175. It is situated on the south shore of Minas Basin, 9 miles east of Cheverie and three miles west of Walton.

As the people of this district had poor facilities for the shipment of lumber or produce unless they went to Walton or Cheverie, the department, during the fiscal year 1914-15, expended the sum of $1,997.19 in the partial construction of a breakwater, to be completed during the coming fiscal year. The work done to date measures 175 by 20 feet with an "L" 30 by 20 feet, and has been completed to within 4 feet of the top. A road was constructed from the public highway to the wharf, 550 feet long and 14 wide.

Work commenced August 24, and was completed October 29, 1914.

### RAY'S CREEK.

Ray's Creek, Annapolis county, Upper Granville, is a thickly settled and very rich farming district, situated on the north bank of the Annapolis river, some four miles below Bridgetown and about ten miles above Annapolis. Within a radius of three miles there is a population of 800 to 1,000. The nearest public wharf was at Granville Centre, six miles below, built by the department in 1902-3. There are two small dilapidated private wharves, one a mile and a quarter above and the other one mile below but they are small, inconvenient and out of repair.

For the convenience of local trade, the department, in 1905-6, expended the sum of $1,500.65 in beginning the construction of a public wharf of pile-work at Ray's Creek, about the centre of the district. The work done under the expenditure was the construction of an approach and the purchase and delivery of the whole of the materials.

In 1906-7, the sum of $1,189.85 was expended in completing the work, which consists of a pile wharf 225 feet long, the shoreward part being 140 feet long, 22 feet wide by an average height of 6 feet, the outer portion being 53 feet wide and from 6 to 22 feet high. Along the face, at H.W.O.S.T., there is a depth of 20 feet of water.

Spring tides rise about 30 feet.

In 1914-15, the sum of $619.38 was expended in repairs and renewals to the upper portion of the work. The repairs consisted of new planking and stringers with a few new fender piles to replace these broken by vessels and ice.

RIVER HEBERT.

River Hebert, Cumberland county, is a small lumbering and farming settlement, situated at the mouth of the River Hebert, about 10 miles south and southwest of Amherst Town. In the year 1898, the department constructed a pile wharf which cost $1,200. About five years afterwards this wharf was extended a further distance of 50 feet up-stream. Both wharfs were built on pile trestle bents, separate 9 feet apart centres. It extends from the bank of the stream 54 feet, and as the old structure had 81 feet frontage, the total frontage is now 131 feet, with a common length of 54 feet from the shore to the bank. During the past fiscal year, repairs, consisting of renewal of planking at one end besides the renewal of about 40 fender piles, were satisfactorily performed. Work was commenced here on August 20, and completed September 5, 1914, at an expenditure of $351.81.

Spring tides rise 40 feet, neap 33 feet.

ROUND HILL.

Round Hill, Annapolis county, on the south or left bank of the Annapolis river, 8 miles east of the town of Annapolis. It is a station on the D. A. Ry. The population of the village is about 500, engaged in farming, fruit raising and general trade.

In 1905-06-07-08 and 09, the Department expended the sum of $5,415 in the construction of a public wharf for the benefit of the local trade. The work consists of a pile work stem 76 feet long, 25 feet wide and from 5 to 16 feet high, terminating in a substantial block of cribwork 75 feet long, 35 feet wide and from 16 to 22 feet high, founded on piles driven to supposedly hard bottom and cut off level with the mud.

Full particulars are given in the report for 1912-13.

In 1914-15, the sum of $274.12 was expended in repairs and renewals to the upper portion of the wharf.

ST. JOSEPH'S.

St. Joseph's, Inverness county, is a fishing and a farming district on the western coast of Cape Breton island, about midway between the harbours of Margaree and Chéticamp, and about one and a half miles to the northwestward of the excellent boat harbour of Grand Etang.

During 1910-11, the sum of $600 was expended in the purchase of the property required for a road to connect a proposed breakwater for the protection of the boat landing beach with the public road, and the sum of $200.09 was expended in partially constructing the road.

On January 13, 1912, a contract was entered into for the construction of a breakwater in the sum of $10,275. Work of construction was commenced on July 15, 1912, and was brought to a satisfactory completion on October 14, following.

The work done by contract is 290 feet long and 20 feet wide on top, with sides and outer end battering 1 in 12, and consists of a continuous round timber cribwork structure, creosoted to half tide, fully ballasted and fendered and protected on the seaward faces with close sheathing.

Besides constructing the breakwater, during 1912-13, the sum of $550 was expended by day labour in completing the construction of the road leading from the public road to the breakwater commenced during 1910-11.

During a very severe gale on December 30, 1912, the outer end of the breakwater for a distance of 75 feet, was badly wrecked and the top of the inner end was damaged, and during 1913-14, the sum of $1,299.02 was expended by day labour in removing the wrecked portion of the breakwater and in repairing the inner end.

During the year 1914-15, the sum of $413.73 was expended in repairs to the outer end of the work, in reballasting some empty bays and in close sheathing the outer end of the work

SALMON RIVER.

Salmon river, Cape Breton county, is a small stream emptying into the west side of the Mira river, about seven miles southwest of Marion bridge, also on the Mira river, which is twelve miles south of the city of Sydney.

The Mira river is a stretch of inland water, navigable for boats of 6-foot draft from its entrance into the Atlantic ocean at Mira bay to Victoria bridge, which crosses it, thirty miles up from Mira Gut or four miles above Salmon river.

During the season of navigation, a steam-launch plies daily and carries freight and passengers between Mira station on the Sydney and Louisburg railway at Mira Gut, and points along the Mira river as far as Victoria bridge, and in order to permit this steamer to make regular calls at Salmon river, the sum of $784.56 was expended by day labour during 1914-15, in the construction of a public wharf.

The wharf is 194 feet long and 17 feet wide, extends to 8 feet at low water, and consists of an approach of gravel 30 feet long with a cribwork block at its end, 10 feet long, and a pile work extension 154 feet long.

SALMON RIVER

Salmon river, Digby county, is a small stream which empties into the Bay of Fundy, seventeen miles north of Yarmouth, thirty miles south of Weymouth, and three and one-half miles north of the boundary line between the counties of Digby and Yarmouth. The population of the place comprises about 500, engaged in farming, lumbering, fishing and general trade. The mouth of the stream is protected on either side by a breakwater, originally built before Confederation. Since 1874, numerous expenditures were made by the department in repairs, extensions and renewals, of which a full account will be found in the departmental report of 1907-8 and 1910-11.

In 1912-13, the sum of $798.48 was expended in extending inwards or upstream, the north breakwater or goyne by a block of substantial cribwork 94 feet long, 11 feet wide and from 6 to 8 feet high.

In 1914-15, the sum of $2,490.44 was expended in building an extension to the main breakwater 45 feet long, 27 feet wide and 22 feet high. The block is of substantial cribwork built on piles driven to hard bottom and cut off level with the beach. Miscellaneous and urgent repairs were also made to the rest of the work.

SANDFORD.

Sandford, is situated on the coast of the mouth of the Bay of Fundy, at the extreme western point of Yarmouth county, seven miles northwest from the town of Yarmouth. The population of the place is from three to four hundred, engaged in fishing and farming.

A breakwater was begun here in 1858 by the inhabitants aided by the Provincial Government. The first expenditure by the department was in 1876, since which date numrous expendiures have been made in repairs, extensions and improvements, of which a full account will be found in the departmental report for 1908-9 and 1912-13.

In 1913-14, the sum of $197.41 was expended in emergent repairs to the floor of the breakwater and in the replacing of a few pieces of sheathing on the seaward face of the work.

In 1914-15, the sum of $7,000 was expended in taking down and rebuilding, from the bottom up, a piece of the inner eastern face of the breakwater 55 feet long, 10 feet wide and 21 feet high. On the shoreward end of the breakwater also a piece 160 feet long, 15 feet wide and 10 feet high was taken down and rebuilt. The outer end of the work was raised a couple of feet, necessitated by settlement. Between 4,000 and 5,000 cubic yards of sand and gravel were removed by hand digging from between the main breakwater and the northeast breakwater-wharf, at a cost of about $2,000.

SANDY COVE.

Sandy Cove, Digby county, is a fishing and farming settlement of some 400 people, situated on the Bay of Fundy side of Digby neck, twenty miles south of Digby town.

In 1904, the department built a breakwater for the protection of the fishing fleet, 211 feet long, 30 feet wide and 31 feet high, at the outer end. The work was of substantial native cribwork with the lower portion, up to a few feet below H.W.O.S.T., of creosoted timber. The cost of the work, by contract, was $13,829.48. Spring tides rise 22 feet, neaps, 19 feet.

In 1912-13, the sum of $1,347.80 was expended: $792.29 in raising the outer 40 feet in length of the breakwater from 2½ to 3 feet, to make up for settlement due to scour; a number of dock planking, about 50 timbers and 10 fenders were also renewed; $551.51 was expended in building a concrete wall on the seaward side of the approach to the breakwater, to protect the roadway from heavy seas. The wall is 60 feet long, from 4 to 8 feet high and from 1½ to 5 in thickness. On the inner or landward side it is filled with large rocks and gravel to form the approach to the breakwater.

In 1914-15, the sum of $546.51 was expended in renewing some of the creosoted sheathing on the outer end and in general repairs to the upper portion of the work.

SAW PIT.

Saw Pit, Lunenburg county, is situated in Lunenburg back harbour, about three quarters of a mile from the town. The wharf was originally a cribwork structure built by the Provincial Government before Confederation for the use and convenience of the inhabitants of the numerous islands and headlands lying along the north and east of Lunenburg peninsula, but since rebuilt in pilework. Small expenditures were made from time to time in repairs and renewals.

In 1899-1900, the sum of $900 was expended in rebuilding the work. It was then 89 feet long and 20 wide with an additional length of 7 feet in an inclined slip, and an approach 60 feet long of earth and gravel. During the year 1909-10, the sum of $50.87 was expended in making temporary repairs. In 1910-11, the sum of $1,508.60 was expended in rebuilding the wharf in block and span. The completed work is 130 feet long and 20 wide with an inclined slip 6 feet in width along the north side, for the accommodation of boats. The height at the outer end is about 15 feet, where there is a depth of 5 feet at L.W.O.S.T.

During 1914-15, $48.28 was expended in making repairs to the approach and placing a crane on the wharf.

Work begun 24th August and completed 31st August, 1914.

SEAFORTH.

Seaforth, Halifax county, is a fishing and farming settlement 24 miles east of Halifax, three miles west of Chezzetcook, and has a population of about 160.

During the fiscal year 1913-14, the department entered into a contract for $17,300 with the Halifax Dredging Company, Ltd., for the construction of a breakwater. The amount of $12,750 was expended during this fiscal year, and the contract was completed during 1914-15. The work is built of solid native timber cribwork, 435 feet in length and 25 feet in width with a timber break on the seaward side 10 feet in width and 5 feet in height. The work varies in depth from 0 to 23 feet at the outer end.

The work for the fiscal year 1914-15, was commenced in July and completed October 21, 1914.

*Protection.*

On the harbour side of this breakwater considerable undermining of the beach took place. Before the breakwater was started this was made good by material washing in from the outside; but the construction of the breakwater, however, prevented the filling in by this outside material, and it was found necessary to build a protection. This work was therefore, started on November 2, and consists of cribwork filled with stone, 395 feet in length with an average height of 6 feet. Work completed March 15, 1915, and amount expended $1,392.86.

SHAD BAY.

Shad Bay, Halifax county, is a small village extending over a sparsely settled length of 1½ miles along the shore, 21 miles from Halifax and 2 miles from Upper Prospect by stage. About 300 persons will be benefited by the work done here. A small amount of farming is carried on but the main part of the inhabitants depend entirely upon fishing for a living.

During the fiscal year 1914-15, the sum of $2,352.44 was expended in the partial construction of a block and span wharf. Three blocks of the main part of the wharf, 17 by 20 feet were built and sunk in position, leaving a space between each block of 12 feet. One of the blocks of the "L" was also placed, this block being 20 by 20 feet and a span of 11 feet between it and the main part of the work. The whole work has been decked and guard timbers have been placed. The length of the main part, as complete to date, is 75 feet and the width is 20 feet, the "L" on the outer end measuring 30 by 20 feet. The shore end which remains to be completed will be 70 by 20 feet.

Work was commenced September 14 and suspended November 30, 1914.

SHEET HARBOUR PASSAGE.

Sheet Harbour Passage, Halifax county, is the name of a post village in Halifax county, eighty miles east of Halifax by stage or water. Contains two stores and telephone communication. Population about 150.

During the fiscal year 1911-12, the sum of $801.27 was expended in the construction of a block and span wharf for the accommodation of the fishermen and to serve as a landing pier for freight. During the fiscal year 1912-13, the sum of $199.37 was spent in completing the wharf begun in 1911-12. The sum of $200.16 was expended in the year 1913-14, in rebuilding the seaward wall of the approach and partially rebuilding part of the approach which had been washed out during the fiscal year 1912-13.

During the fiscal year 1914-15, the sum of $1,999.92 was expended in building an extension to the wharf. This extension consisted of a solid native timber crib, filled with stone, 40 feet long by 20 wide, spaced 10 feet out from the end of the old work. The main part of the work as it now stands measures 150 by 20 feet and has an "L" 20 by 20 feet. A shed was also constructed on the "L" 14 by 16 feet and 8 feet to the eaves.

Work begun June 4 and completed November 30, 1914.

SHELBURNE.

Shelburne, Shelburne county, is situated at the mouth of the Shelburne river, at the head of Shelburne harbour. It is so well known, that a detailed description is unnecessary in this report. In order to afford facilities for larger draught vessels, not only to call, but to carry lumber from this port, the department decided to construct a deep water wharf, and on the 27th of May, 1912, the said wharf was completed.

The site chosen for this wharf is at the extreme end of Water street, at what is known as Battery Point, to which a railway siding from the main line of the Halifax and South Western railway has been graded, and two tracks laid thereon.

The wharf is 966 feet in length, consisting of three parts.

This work is fully described in the report of 1914.

During the past fiscal year, authority was received to expend $1,500 in constructing a freight shed upon the eastern side of this wharf. The amount expended in the construction of this shed was $1,516.71. Work was commenced on December 1, 1914, and completed on February 27, 1915.

The shed is 64 feet long, running lengthwise with the wharf, and 36 feet wide. The posts are 14 feet in height, whilst the roof, which is "V" shaped, has a pitch of 5 feet, making the ridgepole 19 feet above the surface of the wharf. A small office on the northern end has been constructed, a chimney has been built whilst the outer portion is used entirely for freight purposes. The western end is 5 feet distant from the railway track, and has two doors, so located that two cars can be loaded at once from this shed. The floor is 4 feet above the top of the wharf, and placed on a level with the floor of the ordinary regulation freight car, so that the labour incurred in handling freight has been reduced to a minimum. From the middle of January to the middle of March, over 15,000 pounds of fresh fish were handled at the shed. The shed was thoroughly shingled on both the roof and all four sides, and received two coats of red paint, trimmings being steel gray, and presents a very favourable appearance. Spring tides rise 6½ feet, neap 4 feet.

### SHORT BEACH.

Short Beach is the name of a small fishing and farming village of about 100 people, situated on the coast of Yarmouth county, 8 miles north of the county town, 1½ miles north of Sandford and 3½ miles south of Port Maitland.

In 1902-3, and in 1903-04, the sum of $8,155 was expended in the construction, by contract, of a breakwater. The work is 400 feet long, 25 feet wide on top and from 5 to 14 feet high, substantially built of the usual type of round-log cribwork, close-sheathed on the outer face and provided with a break.

In 1908-09, the sum of $1,992.25 was expended in building an extension 50 feet long, 25 feet wide and 15 feet high.

Spring tides rise about 14 feet.

In 1914-15, the sum of $30.26 was expended in repairs and renewals to the floor of the breakwater and the replacing of a small quantity of ballast that had been washed out.

### SIGHT POINT.

Sight Point, sometimes called Port Ban, Inverness county, is on the western coast, of Cape Breton island, seven miles northward of the entrance to Mabou harbour.

In 1900-1, $500 was expended in constructing a cribwork block 24 feet long, 17 feet wide on top, in front 2½ to 4 feet of water at low water, to form part of a small breakwater to shelter and act as a landing place for boats, and in procuring some of the materials for an outward extension of 22 feet in length.

In 1901-2, the sum of $499.76 was expended in procuring the balance of the materials required and in completing the 22 feet extension outward, in completing the sheathing of the 24 feet, built the previous year, and in constructing a rough extension 24 feet long between the inner block and the shore.

During the fiscal year 1907-8, the sum of $899.97 was expanded in strengthening the breakwater and in constructing a 28-foot extension outward.

During 1914-15, the sum of $103.26 was expended in replacing ballast in the outer end of the breakwater and in urgent repairs to its covering.

SKINNER'S COVE.

Skinner's Cove, Pictou county, is on the western side of Northumberland strait, about 8 miles east of Cape John and about 20 miles northwest of Pictou harbour. A pond at the head of the cove is separated from the waters of the strait by a sand beach 250 feet in width.

The works, for the protection of a channel through the beach, undertaken in 1905-06, and continued in 1906-7, 1907-8 and 1908-9, include: A pier on each side of a channel dredged to 2½ feet at extreme low water of pile, brush and stone work, 344 feet in length and 20 feet in width with a cribwork head 40 feet in length and 20 feet in width with a creosoted substructure, and an extension inward 156 feet in length on the west side and 68 feet in length on the east side, of brush and stone 14 feet in width on top and 8 feet in height, founded in a trench excavated to 3 feet above extreme low water.

In 1909-10, the sum of $2,822.10 was expended in reopening the channel and in nearly completing its extension inwards 400 feet to the pond.

In 1910-11, the sum of $331 was expended in deepening part of the channel by hand dredging.

In 1912-13, the sum of $398.40 was expended in replacing about 380 feet b.m. of hardwood sheathing and about 500 cubic yards of stone in the pile, brush and stone work on each side of the channel.

During the fiscal year 1914-15, the sum of $243.42 was expended in repairs to pile, brush and stonework on each side of entrance, including replacing brush and stone and some covering and sheathing.

Work was in progress in November.

SMILEY'S POINT.

Smiley's Point (Port Dufferin), Halifax county, is a village of about 300 people, engaged in fishing, lobster canning and gold mining, situated at the head of Salmon river, which empties into an inlet known as Beaver Harbour, about 85 miles east from Halifax by road and about half-way between Halifax harbour and Canso.

During the fiscal year 1908-09, the sum of $452.12 was expended in the purchase of timber for the construction of a breakwater about half a mile below the public wharf known as the Port Dufferin wharf. In the fiscal year 1910-11, the sum of $2,551.24 was expended in constructing the breakwater. The completed work consists of a stone and earth approach 54 feet long, with an average width of 24 feet; from here the structure is of native timber filled solid with ballast, 16 feet wide for a distance of 131 feet and 20 feet wide for the remaining 43 feet. It has a height which varies from 0 at the shore end to 23 feet at the outer end. The work is sheathed on the seaward face and has a break 3½ feet in height.

During the fiscal year 1914-15, the sum of $14.46 was expended in replacing some sheathing which had been torn away during one of the severe storms of the winter.

Work done during the month of March, 1915.

SMITH'S COVE.

Smith's Cove, Inverness county, is situated on the eastern coast of Smith's island, near its northern end and opposite the town of Port Hood, from which it is distant about 1 mile.

This cove was originally a good boat harbour but of late years it has been gradually filling in with sand and this action continued until it could not be entered at all, to the great inconvenience of fishermen who were obliged to drag their boats over the beach for safety during storms.

In order to relieve the situation, it was decided to open a chanuel into the cove, 50 feet wide and to a depth of 8 feet at low water.

The Government dredge *Cape Breton* commenced operations on September 4th, 1914, and continued at intervals until October 6th following, when during a heavy gale the channel cut was filled in again almost to the original depth and the work was suspended. During that period, 3,450 cubic yards in place of sand were overcast and 1,600 cubic yards, scow measure, of material were removed.

In order to prevent the sand from drifting into the cove, it was decided to construct a small breakwater on the northern side of its entrance before resuming the dredging. On January 19, 1915, instructions were received to expend the sum of $1,800 on the construction of this breakwater, 175 feet long and 12 feet wide, fully ballasted and sheathed on all outer faces. The work was placed in hand at once, but owing to the difficulty in obtaining the necessary materials and to inclemency of the weather, of the amount authorized, the sum of $1,019.87 only could be expended by the end of the fiscal year, and with this amount the construction of the cribwork proper including the ballast flooring was completed and about half ballasted, leaving the balance of the ballasting, the sheathing and the covering still to do to complete the work.

### SOUTH COVE.

South Cove, Victoria county, is a district on the southern shore of St. Patrick's channel, an arm of the Bras D'Or lakes, about 6 miles to the eastward of Little Narrows.

During 1910-11, a plan and specification for the construction of a block and span wharf, to be built by day labour, were prepared and the sum of $4,681.94 was expended in procuring nearly all the materials required for its construction.

The sum of $3,000 was voted for expenditure during 1911-12, in the construction of the wharf for which the materials were obtained during the previous year, and of the amount voted, the sum of $1,791.97 was expended in completing the wharf, with the exception of some ballasting, the placing of about one-half the covering and the placing of the cap-timbers and a portion of the upper fenders.

Out of the amount authorized for 1912-13, the sum of $313.32 was expended in completing the wharf commenced during 1911-12, the work done consisting of ballasting, laying of balance of covering and the placing of cap-timbers and of the balance of upper fenders.

The wharf is 195 feet long and 20 feet wide with an "L" 20 by 20 feet on the eastern side of the outer end, and extends to 11½ feet at low water. It consists of blocks and spans; the blocks are built of round timber with creosoted timber substructure, and the outer faces of the two outer blocks were close-sheathed.

During 1914-15, the sum of $147.21 was expended in the construction of a freight-shed on the outer end of wharf, 10 by 12 feet, for the accommodation of freight landing during rainy weather or at night.

### SOUTH INGONISH.

Ingonish bay, Victoria county, is situated on the eastern coast of Cape Breton island, about midway between Sydney harbour and Cape North, and is divided into North and South bays, by Middle Head, a narrow and rocky neck of land, over 2 miles in length.

At the head of the South bay is an extensive lake, separated from the sea by a beach through which there formerly existed but a shallow channel.

During 1913-14, the sum of $438.22 was expended in the construction of an addition, 30 feet in length, consisting of a cribwork block with creosoted timber substruc-

ture, 20 feet long and 40 feet wide, connected with the old work by a span 10 feet long and 32 feet wide, and a warehouse, 12 by 16 feet, was constructed and placed on the outer end of the old work.

The sum of $3,000 was voted for expenditure during 1914-15, on the further extension of the wharf. Instructions were received to expend the amount by day labour, but it was found impossible to import the necessary creosoted timber and it was decided to buy all materials which could be obtained in the country during the present year, and to postpone the construction of the work until next year. Of the amount voted, the sum of $435.84 was expended during 1914-15, in obtaining all the native timber, iron and ballast required for the extension of the work.

SOUTH LAKE, LAKEVALE.

South Lake, Lakevale, Antigonish county, is situated on the western shore of St. George's bay, about midway between the entrance to Antigonish harbour and Cape George.

It is a large sheet of fresh water, separated from the bay by a beach of sand and gravel, about 900 feet in length, 300 feet in width and about 8 feet above the level of high water springs.

In 1907-8-9, a channel was cut through the beach, 40 feet wide at the bottom and 2 feet below high water, and a breakwater was built 300 feet long and 20 feet wide, consisting of ordinary cribwork, to protect the north side of its seaward entrance; during 1909-10, the channel was completed through the beach to a depth of 1½ feet below low water springs.

In 1910-11, a brush and stone dam was constructed 75 feet long and 12 feet wide on top at the inner end of the breakwater to close a breach made there, and in the removal of some 150 cubic yards of sand out of the channel.

In 1911-12, the sum of $1,707.88 was expended in procuring timber and ballast required for the construction of a proposed extension, 40 by 20 feet in line of work.

In 1913-14, the sum of $1,042.39 was expended in bulk-heading part of outer end of breakwater to prevent ballast from going through the face-timbers and in renewing about 60 feet of cribwork at inner end of breakwater, 4 feet in height and from 8 to 10 feet in width.

During the fiscal year 1914-15, the sum of $2,142.56 was expended in constructing a protection work on the southern side of the entrance consisting of brush and stone work 15½ feet wide for a distance of 32 feet, and pile, brush and stone work for a further distance of 132 feet to 1½ feet at L. W. S. T. Spring tides rise 4½ feet.

Work was in progress during the months of August, September, October, November and December.

SPANISH SHIP BAY.

Spanish Ship Bay, Guysborough county, is an arm of Liscomb Harbour, the entrance to which is about eight miles east of the Halifax and Guysborough county line at Ecum Secum.

On August 8, 1908, the sum of $1,800 was authorized for expenditure by contract. March 1, 1909, a contract plan, specification and estimate of cost were forwarded. August 10, 1910, an Order in Council was passed authorizing the purchase of wharf and property from Zebedee Hartling for the sum of $420; in 1910, the sum of $455.04 was expended during the months of October, November and December by day labour in raising, reballasting and building approach to wharf.

In the fiscal year 1911-12, the sum of $324.75 was expended in paying for and piling in place of safety, about 1,000 feet of round logs, ordered in 1910-11, delivered in 1911-12, and in purchasing part of the materials required in the construction of a proposed extension.

In 1913-14, the sum of $300.02 was expended in securing some of the timber and ballast for the proposed extension of the wharf.

During the fiscal year 1914-15, the sum of $679.75 was expended in purchasing the balance of materials required and in completing the extension to the wharf. The new work is 37½ by 25 feet in line of work, constructed of round native timber cribwork, fully ballasted, sheathed and fendered on the three outer faces with hardwood and extending to 8 feet at L.W.S.T. Spring tides rise 6½ feet.

In addition to the above, a hand railing 60 feet in length, was placed along the outer side of the road which connects the wharf with the public road.

Work was in progress in October and November.

Total expenditure to March 31, 1915, not including cost of purchase, $2,170.56.

### SPRY BAY.

Spry Bay (Henleys), Halifax county, is situated some seventy miles east of Halifax, the adjacent population numbering about 1,000, chiefly engaged in fishing and farming.

The construction of a block and span wharf was begun here in the year 1913-14, and the sum of $2,798.58 was expended in the partial construction.

During the fiscal year 1914-15, the sum of $3,069.45 was expended in the completion of this wharf. As completed, it measures 135 feet in length and 20 feet in width, with a stone and gravel approach 68 feet in length, 40 in width at the shore end and 20 in width where it joins the wharf. The wharf has an ell 56 feet long by 20 wide, and a shed has been placed on the ell, 16 by 18 feet. The wharf has a face length of 76 feet and a depth at low water along the face of 14 feet.

Work was begun June 8, 1914; completed March 31, 1915.

### SPRY BAY (LESLIES).

During the year 1903-04, the sum of $507.94 was expended in the purchase and delivery of timber, preparatory to the construction of a suitable wharf. This was carried out in 1904-05, with an expenditure of $1,500. The structure is of pile work, 191 feet long with a stone approach 75 feet long by 25 wide, with an ell 50 by 30 feet, giving a face length of 75 feet and a depth at L.W.O.S.T. of 11 feet. A shed was placed on the wharf, 16 by 25 feet.

During the fiscal year 1910-11, the sum of $199.93 was expended in renewing the covering, fenders, piling and bracing and in replacing some stone at the outer end of the approach.

In the year 1914-15, $1,205.25 was expended in placing 127 new piles, 360 new stringers 8 by 10, and rebuilding the whole top with 3-inch spruce. Three ladders were placed on the wharf, the shed was painted, and a crane placed. Some repairs were also made to the face of the approach.

Work commenced September 22, 1914; completed March 16, 1915.

### SUMMERVILLE.

Summerville, Hants county, is a village situated on the east bank of the Avon river, about midway between Windsor and the mouth of the Avon where it empties into the Basin of Minas. It is about 4 miles south of Cheverie, and the population at present is about 200.

In 1866, a public wharf was built by the inhabitants, aided by the Provincial Government, its dimensions being 275 feet long by 29 wide and 20 high at the outer

end. Numerous expenditures have been made from time to time for repairs and additions to the work. During the fiscal year 1910-11, the sum of $1,200 was expended in making extensive repairs.

During the fiscal year 1914-15, $514.86 was expended in replanking the wharf, placing new fenders at the outside corners and sheathing these corners with iron plating. Some repairs were also made to the slip.

Work commenced June 26 and was completed November 23, 1914.

### SURETTES ISLAND.

Surettes island, Yarmouth county, is one of a numerous archipelago lying off the south coast of the county. It is a mile and a half long by about a quarter of a mile wide and is separated from Sluice point on the mainland by a channel about 800 feet wide, through which ebb and flood tide flows with an alternating maximum current of seven to eight knots per hour. The population of the island comprises about 250, almost exclusively engaged in fishing.

Spring tides rise 13 feet, neaps 10 feet.

In 1886-87, the department built, at a cost of $912.60, a small wharf on the extreme south end of the island, which is 10 miles southeast from Yarmouth, the county town. The wharf is 85 feet long, 19 feet wide and at the outer end 11½ feet high, built of open-faced round log cribwork, of the ordinary type, and filled with stone, the top or floor being of gravel and only a few inches above H.W.O.S.T.

In 1914-15, the sum of $215 was expended in repairs and renewals to the upper part of the wharf, to restore it to general usefulness.

### SWIMS POINT.

Swims Point, Shelburne county, which is practically a continuation of Clarks Harbour, is situated 1½ miles east of the town proper. The wharf consists of a stone bank approach, made up of a natural sloped rock bank, 35 feet in length, 25 feet wide on top with a graded covering of 6 inches of good, coarse gravel, and the wharf proper, which is 213 feet in length, built of alternate block and span with the exception of the last 50 feet, which is solid, continuous cribwork. This wharf proper consists of three 10-foot blocks of cribwork, three 18-foot blocks, one 25-foot block, separated from each other by three 15-foot spans and three 10-foot spans; the head is 50 feet in length, and has a width of 40 feet. The rest of the work is 20 feet in width; the height at the outer end is 29 feet. During the past fiscal year, considerable repairs have been made upon this work, costing $449.93. These repairs were commenced on November 17, 1914, and completed January 6, 1915. They consist of the replacing of 12 fenders and 3 mooring posts, the 3 outside spans were sheathed on the outside with 3-inch plank, whilst 3 fenders were placed in each span, separate about 4 feet apart longitudinally; the approach was repaired and a plank walk, 10 feet wide, for the entire length of the wharf, was built.

Spring tides rise 10 feet, neap 7 feet.

### SYDNEY HARBOUR.

#### *South Bar.*

The "South Bar" is situated on the southern side of Sydney harbour, N.S., at the entrance to its southwestern arm, about 5 miles from the city of Sydney.

This bar extends about 4,000 feet out into the harbour and forms the principal protection to its southwestern arm on which the city of Sydney is situated, and as the bar was wearing away and danger existed of a channel opening through it, the depart-

ment decided to purchase its seaward front and to build protection works thereon. The land was expropriated by Order in Council on August 25, 1911, and the sum of $5,000 was authorized to be expended during 1911-12, on works for the protection and preservation of the bar.

The breaches which had been made in the beach were caused by the removal of sand for building purposes, but as soon as the department took possession of it, the removal of sand was stopped and the breaches closed up again by degrees. It was not found necessary to expend any of the amount authorized for closing them.

In the spring of 1914, during a severe northerly gale, a breach was made through the beach by the heavy sea and as it was found that it was gradually widening, it became necessary to close the gap in order to prevent serious damage, and out of the amount authorized up to November 30, 1914, the sum of $461.25 was expended by day labour in closing the breach by ordinary cribwork, 6 feet wide of from 4 to 5 feet in depth, over a distance of 265 feet.

### TANGIER.

Tangier, Halifax county, is a thriving settlement on the Atlantic Coast of Nova Scotia, with a scattered population of from 500 to 600. It is situated at the head of Tangier harbour, 60 miles east of Halifax. In the neighbourhood are extensive gold areas famous for having produced the largest nugget (27 ounces) ever found in Nova Scotia.

In the fiscal year 1907-8, a block and span wharf was built, the expenditure being $2,080.89; and the following year the sum of $628.89 was expended in the completion of the approach, which was built 80 feet long by 25 wide.

During the year 1911-12, the sum of $410.97 was expended in the construction of a small freight shed on the wharf. In the year 1913-14, repairs were made to both the approach and wharf, at a cost of $1,222.61. The road was repaired by rebuilding the wall on the seaward side for a length of 575 feet and average height of 2 feet. The width of the road was increased by 6 feet, filled in and graded. New flooring was also placed over a portion of the wharf.

During the year 1914-15, the sum of $4,258.94 was expended in building an extension and ell, the work being carried out by sinking a native timber cribwork block, 25 by 50 feet, one end being in line with the western side of the wharf and leaving a span of 10 feet between this work and the old work. The whole wharf, as it is now completed, from the approach out, measures 138 feet and has a width of 25, with an ell 25 by 25 on the outer end, giving a face length of 50 feet and a depth at low water of about 14 feet along the face. Part of the old work where it had settled was raised this year, and the whole top of the wharf replanked. The shed was moved out to the ell of the wharf.

Work was commenced September 10, 1914, and completed March 27, 1915.

### TERRANCE BAY.

Terrance Bay, Halifax county, is a small village of about 250 people, situated 21 miles west of Halifax, on the Atlantic coast, the inhabitants are wholly dependent upon fishing for their livelihood.

In the fiscal year 1913-14, the department constructed a block and span wharf, 121 feet long by 25 feet wide, with an average depth of 15 feet. The expenditure for this work was $4,321.42.

During the fiscal year 1914-15, the department authorized the expenditure of $2,500 for the completion of this wharf.

The work, as completed, measures 164 feet in length by 25 feet in width, and has an average height of 20 feet.

Work started July 15, and was completed August 31, 1914.

TROUT COVE.

Trout Cove, Digby county, is on the Bay of Fundy coast of Digby neck, midway between Digby Gut and Petite Passage, or about 18 miles from each. The settlement at and near the cove, which is called Centreville, has a population of about 400, engaged in fishing and farming. A factory for the canning of finnan haddies, kippered herring, etc., does a considerable business.

A breakwater was begun in 1856, by the inhabitants aided by the Provincial Government. It was extended in 1876 by the department and since that date numerous expenditures have been made in repairs, renewals and extensions, of which a full account will be found in the departmental reports for 1911-12 and 1912-13.

For the purpose of constructing an entirely new breakwater, the department in April, 1912, awarded a contract to Messrs. MacKay Bros. of Sydney, N.S., representing the Norfolk Creosoting Company of Norfolk, Va., for the supply of 520,000 feet, b.m., of 10 by 12-inch creosoted pine, at the contract price of $54.75 per thousand, delivered. The first cargo, comprising 460,000 feet, b.m., arrived at Trout Cove on August 17, 1912. The second cargo of 60,000 feet, b.m., on July 2, 1913.

Early in August, 1912, a contract was awarded to Mr. E. R. Reid for the construction of the new breakwater, for the sum of $44,500, the department furnishing the creosoted timber. The work was begun about August 1, 1912, and completed early in November, 1914. The stem or main portion of the work is 560 feet long, 30 feet wide on top and from 5 to 40 feet high. The "L" is 190 feet long, 32 feet wide on top and from 40 to 45 feet high. The lower portion of the work, up to 5 feet above L.W.O.S.T., is built of creosoted timber, as a protection against the limnoria. In addition to a freight shed and waiting room, the breakwater has been provided with ramp and steps on the harbour side, for the accommodation of freight and passengers during the rise and fall of tide. Spring tides rise 23 feet.

TURNER'S ISLAND.

Turner's island, Halifax county, called in former reports, "Quoddy Island," is situated on the west side of Harrigan cove, about 100 miles east of Halifax, being 4 miles east of Port Dufferin, having within a radius of about two miles a population of about 100.

During the fiscal year 1908-9, the sum of $823.25 was spent in the partial construction of a public wharf. During the fiscal year 1909-10, the sum of $999.83 was expended in the construction of the pier. The completed work consists of a stone and gravel approach 100 feet long and 20 wide, from 2 to 12 feet high, and a block and span wharf, 58½ feet long by 20 wide with an ell 31 by 21 feet. There is a shed on the wharf 11·5 by 25 feet. The wharf has a face length of 51 feet and a depth at low water of 14.

During the fiscal year 1914-15, the sum of $5.74 was expended in providing a block and tackle for the derrick on the wharf, this work being carried out in the month of November, 1914.

UPPER PROSPECT.

Upper Prospect, Halifax county, is a thriving little village of about 450 inhabitants, wholly dependent upon fishing for their livelihood. It is situated about 23 miles west of Halifax by stage.

*Wharf.*

In the fiscal year 1902-3, the department expended the sum of $767.26 in the construction of a small wharf of pile work. In 1903-4, $453.62 was expended in completing the work. It is 63 feet long by 25 wide with an ell 30 by 28 feet and has

a depth at L.W.O.S.T. of 9 feet along the face. There is a stone approach to the wharf 25 feet wide and 10 feet long, and a shed is constructed on the wharf 12 by 15 feet.

During the fiscal year 1914-15, the sum of $80.56 was expended in making general repairs, consisting of regrading the approach, replacing guards and placing some new planking and pile braces.

Work was commenced March 17, and completed March 20, 1915.

*Breakwater.*

During the year 1908-9, an amount of $3,226.98 was expended in the construction of a small breakwater. The work is of solid native timber cribwork, 120 feet long by 30 wide, and from 12 to 14 feet high with a break on the seaward side. During the fiscal year 1909-10, the sum of $103.20 was expended in completing the close sheathing and planking. In the fiscal year 1910-11, the sum of $3,685.29 was expended in extending the breakwater 80 feet in length. The extension is 30 feet wide, and from 12 to 14 high . In the fiscal year 1913-14, the sum of $168.99 was expended in miscellaneous repairs, such as the placing of more ballast, laying new planking and sheathing.

During the fiscal year 1914-15, the sum of $2,700.34 was expended in making a further extension to the breakwater. This extension is built of solid native timber cribwork and forms an ell 50 feet in length by 30 in width, having an average height of 15 feet and a break 4 feet in height on the seaward side.

Work was begun August 20, and completed October 29, 1914.

VICTORIA BRIDGE.

Victoria bridge, Cape Breton county, is situated at the southern end of Mira lake, about 26 miles inland from the mouth of the Mira river, and is respectively 13 and 21 miles above Albert and Marion bridges, both of which are draw-bridges.

During the summer season, a small steamer is engaged in the passenger and freight traffic in towing scows carrying coal and merchandise on her upward trip, and pit-timber on her downward trip. As it is both difficult and expensive and sometimes almost impossible to land freight and passengers, the construction of a wharf was decided upon, and during 1913-14, the sum of $881.95 was expended by day labour in the construction of a block and span wharf 96 feet long, 20 feet wide and extending to 9 feet at low water.

During the fiscal year ended March 31, 1915, the sum of $91.52 was expended in the construction of a freight shed 10 by 12 feet on the outer end of the wharf.

VOGLERS COVE.

Voglers Cove, Lunenburg county, is an important fishing and farming district situated 15 miles west of the mouth of the La Have river. Population about 160.

In the fiscal year 1909-10, the sum of $1,655.98 was expended in beginning the construction of a pile and cribwork wharf and in the purchase of timber for the completion of the work during the next fiscal year. During 1910-11, the sum of $1,111.94 was expended in building the wharf. It has a total length of 250 feet and a width of 25. The shoreward 50 feet in length is constructed of stone and earth filling, the next 100 feet of block and span cribwork and the outer 100 feet of pilework. The wharf is from 7 to 21 feet high and has a depth of 11 feet at the outer end at L.W.O.S.T.

During the fiscal year 1914-15, the sum of $1,057.88 was expended in the purchase of material for the construction of a breakwater and landing skids about a mile distant from the above wharf, to be built next year.

WALTON.

Walton, Hants county, is a post village, situated on Minas Basin, 15 miles from Scotch Village Station on the Midland branch of the Dominion Atlantic Railway. Population about 500. The most important industry of the place is the shipment of gypsum, about 35,000 tons being exported annually to the United States. The annual lumber shipment varies from 2 to 5 million feet.

*Breakwater.*

For the protection of the harbour, a breakwater was built by the department, in 1891, at a cost of $6,170.00 (under contract). The work is 250 feet long 28 high at the outer end and 22 wide on top. At the outer end there is a depth of 24 feet at high tide. During the fiscal year 1910-11, the sum of $176.19 was expended in making repairs to the end of the work, which was run into and damaged by a tow boat. During the fiscal year 1913-14, the sum of $1,000 was expended in general repairs to the work.

During the fiscal year 1914-15 the sum of $300.01 was expended in making repairs. New fenders and some new planking were placed and part of the break rebuilt.

Work commenced July 6, and was completed September 22, 1914.

*Wharf.*

During the fiscal year 1913-14, a block and span wharf was constructed, under contract with Albert Parsons, the amount of the contract being $14,400. During the year 1914-15, Mr. Parsons completed his contract and an extra amount of $250 was paid him for building and grading the road and approach to the wharf, as this work was not allowed for in his contract.

The structure is of block and span construction, the blocks being 25 by 50 feet with spans of 10 feet. The total length is 390 feet with a width of 25 and average height of 24 feet. A vessel bed was built, 250 feet long and 50 wide, formed of flatted 12 inch logs bolted to the rock bottom in such a manner as to give a smooth and perfect bearing for vessels lying at the wharf.

The total cost of this work was $14,650.

WEST ARICHAT.

West Arichat, Richmond county, is a small but safe harbour on the west coast of Isle Madame, sheltered from the south and west by Creighton island, and by a breakwater between it and Isle Madame.

The breakwater was built by the department about 38 years ago for the protection of the harbour and is 1,200 feet long by 24 feet wide and consists of native round timber cribwork, fully ballasted and planked over, and the top is about 11 feet above the bottom, which is dry during low water springs. It connects the mainland with Creighton's island and is used as a roadway between them.

During the years from 1904 to 1908, sums aggregating $1,840.97 were expended in urgent repairs and renewals principally to the covering and floor stringers.

During 1911-12, the sum of $664.04 was expended in procuring a portion of the materials for repairs required to place the breakwater in good condition, and during the year 1912-13, the sum of $2,138.95 was expended in procuring the balance of the materials required and in the partial reconstruction of the top of the work, consisting of the renewal of floor stringers, covering and cap-timbers.

During 1914-15, the sum of $1,199.68 was expended in continuing the work of reconstruction of the top of the breakwater commenced during 1911-12, and continued during 1912-13.

*Dredging.*

Owing to the existence of a shoal, opposite and to the southward of the channel, which caused a contraction in the channel and interfered with the safe approach to the wharf, an agreement was entered into with the Atlantic Dredging Company, of Louisburg, for the removal of the shoal to a depth of 13 feet at low water springs, at the rate of 38½ cents per cubic yard, scow measure.

Operations were commenced on September 9, 1914, and continued until October 28th following, when solid rock was met with and as the operating plant was not fitted for the removal of solid rock, the work was suspended.

The whole of the work done consisted in the removal of 9,367 cubic yards, scow measure, of sand, clay and ledge rock, and as this material in place represents 6,347 cubic yards, the expansion factor is 47·58 per cent, but the contractors were only paid for the removal of 9,123 cubic yards, scow measure, which at the stipulated rate of 38½ cents per cubic yard, scow measure, amounted to $3,512.36.

The work, as stated before, was not complete, but conditions were greatly improved, as the channel between the end of the wharf has been widened by about 90 feet, or from the original width of 135 feet to a width of 225 feet, and the desired depth of 13 feet at low water was obtained over the whole of this distance.

WEST CHEZZETCOOK.

West Chezzetcook, Halifax county, is situated on the western side of Chezzetcook Inlet which lies 16 miles east of Halifax. The Inlet is from half to three-quarters of a mile wide at its mouth and extends five miles inland, receiving the waters of several small lakes at its head. It is on an average about one mile wide, but is quite shallow, with a bottom of mud and sand, so that at low water extensive flats are laid bare. There is, however, a narrow, tortuous channel, which runs to the extreme head of the Inlet, with a depth of from 6 to 8 feet at L. W. O. S. T., and is used by numerous fishing schooners and also quite a few hand fishing boats and skiffs and other small craft.

*Breakwater.*

This work is fully described in the report of 1914.

During the fiscal year 1914-15, the sum of $200.90 was expended in placing 35 new fenders and some new stringers, bolting some of the old stringers and spiking down a portion of the old flooring extending over a length of 150 feet.

Work was begun March 11 and completed March 24.

*Wharf.*

During the year 1910-11, the sum of $101.85 was expended in the purchase of timber for the construction of a new wharf; and during 1911-12, the sum of $836.15 was expended in the construction of a stone and earth approach and cribwork blocks. During 1912-13, the sum of $1,199 was expended in the completion of the pilework portion of the wharf. The work is built on the mainland on the western side of the harbour, and has a total length of 212 feet, the approach being 82 feet by 20 feet wide, and the pilework portion 112 by 25 feet and the cribwork block 18 by 20 feet wide. It has a face length of 25 feet and a height varying from 0 to 14 feet at the outer end.

During the fiscal year 1914-15, the sum of $678.77 was expended in the purchase of timber and barking of same, preparatory to the building of an extension to the wharf during the next fiscal year.

Work was begun March 16 and ended March 26, 1915.

WESTERN HEAD.

During the past fiscal year, the amount of $192.54 was expended in making certain limited repairs to this work. At the end of the breakwater, a few stones had been displaced, leaving a very bad hole, which some years ago was filled in with timber. The timber became weakened, and in the spring of 1914, during a very heavy storm, was washed out. During the past fiscal year this hole was filled with concrete. Work was commenced on September 9, and completed on September 30, 1914.

Spring tides rise 7 feet, neap 4½ feet.

WEST HEAD.

This headland is the westernmost point of Cape Sable island, and is situated about 2 miles from Clark's harbour. It is at the southwestern end of Barrington Passage, and is an important fishing section. During the past fiscal year, $699.98 was expended in completing the extension described in the report of 1914. Work was commenced on September 18, and completed on October 31, 1914. The break on the top of the wharf consists of 12 by 12 timber. It is 6 feet above the top of the wharf, situated on the outside faces of the same and for every 5 feet on its length, piles 14 feet long bolted to both the barrier and the wharf or breakwater, have been fastened. The extension, which is 20 feet by 40 feet, is of continuous round-log cribwork and has been constructed in substantial style. The logs were large and heavy, a large amount of iron was used in the fastenings and the ballast was brought up to the floor stringers. Spring tides rise 12 feet, neap 9 feet.

WEST PORT JOLI.

West Port Joli, Queens county, is situated across Port Joli harbour, about 2½ miles southwest of Port Joli, and about 16 miles southwest of Liverpool. It is used as a fishing station by from 75 to 100 fishermen, who live in the surrounding districts, and the breakwater has been built for the purpose of developing and fostering the fishing industry, as this coast is exposed to all eastern and southeastern gales.

In the fiscal year, 1908-9, about $3,000 was expended in commencing the construction of a breakwater. During the fiscal year 1910-11, an additional sum of about $2,000 was expended in constructing an extension to this work.

During the past fiscal year, the amount of $2,986.62 was expended upon this work, it being commenced on August 7, 1914, and completed on October 17, 1914. An extension of 100 feet was planned, but only 66 feet was built, whilst 80 feet of the old work was sheathed with 7-inch logs, faced on two continuous sides. The breakwater at present consists of a rock bank, 105 feet long, 24 feet wide on top, and 404 feet of continuous cribwork, having a height at the outside end of 21 feet. This cribwork has a common width of 20 feet. It is of round logs, well ballasted, fendered and fastened.

Spring tides rise 7 feet, neap 4½ feet.

WEST WOODS HARBOUR.

West Woods Harbour, Shelburne county, is located on the western side of Woods harbour, opposite Middle Woods harbour. It has a population of about 200, who receive most of their livelihood from the lobster fishery, and who require some shelter and accommodation for their boats.

About 11 years ago, the department constructed a small wharf, and during the past fiscal year, this wharf was extended. The number of boats had increased, and the

requirements for their shelter were absolute. During the past fiscal year, $2,984.26 was expended upon this work, commencing on September 12, and completing on November 30, 1914.

The old wharf was 88 feet long, 20 feet wide on top, with the exception of the head, which was 40 feet wide. In order to give better protection and more dock room, the outer piece of the head, 20 feet by 20 feet, was removed. The work was extended an additional 30 feet with a common 20 foot width, and then extended up the harbour 20 feet, and down the harbour 40 feet, making the last 20 feet 80 feet in width. It has a height at the outer end of 20 feet and now has a total length of 138 feet. With the exception of the two cribs on the outer end, the entire work has been completed. These cribs will require more ballast, and will have to be topped, but they do not interfere at all with the use of the wharf at present, and is not a cause of urgency. Spring tides rise 10 feet, neap 7 feet.

WHITEHEAD.

Whitehead, Guysboro' county, is a fishing village on the western side of White Haven, a fine harbour on the southern or Atlantic coast of Nova Scotia, 14 miles to the westward of Canso harbour.

The public wharf at this place, completed in 1906, extends 168 feet to 16 feet at low water. Spring tides rise 6·6 feet. It is a block and span structure, 20 feet in length; of two central blocks, each 20 feet in length, and an outer block forming a "T" head, 20 feet in line of work and 60 feet in width, of native timber intervening spaces.

A warehouse, 18 by 30 feet, was built on a separate foundation on the southern side of the inner end in 1906 and a small freight shed, 10 by 16 feet, on the southern end of the "T" head in 1907-08.

During the fiscal year 1914-15, the sum of $10 was expended in repairs to the warehouse, including replacing broken glass in windows, replacing shingles, hinges and lock in small warehouse.

Work was in progress in February.

WHITE POINT.

This work was partially constructed in 1913-14. During the past season, the sum of $417.67 was expended in effecting certain repairs. Work was commenced September 7, and completed October 6, 1914.

WHITEWATERS.

Whitewaters, Kings county, is a small farming and lumbering settlement of about 200 people, situated on the west coast of Minas basin, about three-quarters of a mile south of Cape Bomidon, and 10 miles northeast of the village of Canning.

In 1897-8, the department built a public wharf at a cost of $3,999.08, by day labour. It is 285 feet long, 20 feet wide with an "L" at the outer end 35 feet long, where, at high water ordinary spring tides, there is a depth of 17 feet of water. The wharf is constructed of block and span work. The blocks are solid cribwork 19 feet long in the stem of the wharf, the spans being 14 feet in clear opening.

From 1901 to 1913, several expenditures have been made, a full account of which can be seen in the departmental report for 1912-13.

In 1913-14, the sum of $149 was expended in the construction of a piece of cribwork for the protection of the approach to the shore end of the breakwater, 20 feet long, 10 feet wide and 13 feet high.

In 1914-15, the sum of $25 was expended in repairs to the covering of the wharf.

WHYCOCOMAGH.

Whycocomagh, Inverness county, is a village on the north side of a bay of the same name at the head of St. Patrick's channel, an arm of the Bras d'Or lake.

A private wharf was purchased with a warehouse and right of way to the public road, in 1897-8, and repaired and extended in 1898-99, and 1899-1900. The wharf was then 228 feet long, including 144 feet of stonework, 21 feet wide, and 84 feet of pile-work, 25 feet wide over 59 feet of its length and 60 feet wide over the outer 24 feet, built over the remains of an old block and span structure.

During 1902-3-4-5 and 1907-8, expenditures were made in slight repairs to the wharf, warehouse and approach.

During the fiscal year 1910-11, the sum of $2,398.11 was expended in nearly completing a triangular pile-head, 78 feet long on channel face by 83 feet in line work to replace a pile-head which was in a dilapidated condition. The depth along channel face was 12½ feet at low lake level.

During 1911-12, the sum of $565.90 was expended by day labour in completing the work in progress during the preceding year. The work done consists in the placing of about 2,000 feet b.m. of covering, 18 fender piles, 2 mooring piles and about 3,000 feet b.m. of shocks.

During 1913-14, the sum of $522.80 was expended in repairs to the stone approach to the wharf, in repairs to the old warehouse, in the construction of a small warehouse, 10 by 12 feet at outer end of the wharf, and in the construction of a motor-boat landing on the western side of the inner end of the wharf, and during 1914-15, the sum of $16.20 was expended in repairs to windows and window-panes in the old warehouse.

*Dredging.*

The depth of water at the wharf and in front of it having been found too shallow for the business of the port, it was decided to deepen to 13 feet at low water around the sides, for a distance of 100 feet, in a width of 100 feet, and form a basin, 300 feet by 300 feet in front of the wharf, and in a channel 400 feet long by 100 feet wide, and a contract was entered into with the Atlantic Dredging Company, Ltd., of Louisburg, for the removal of 27,000 cubic yards, scow measure, at 19 cents per yard.

On September 25, 1913, the dredge *Pepperell* commenced operations and continued until November 6 following, when the work specified was completed by the removal of 27,058 cubic yards of muck at a cost of $5,141.02. It having been found that a bar existed outside of dredged channel, with less than 13 feet of water, an arrangement with the Atlantic Dredging Company was made for an extension of the channel to 13 feet at low water, for a distance of 700 feet, involving the removal of 11,800 cubic yards, scow measure, of material.

Operations were resumed by the company on November 21, and continued until December 19, 1913, when the amount agreed upon was removed, but the work was not quite completed, and as the ice was forming at the time, the work had to be suspended.

On August 7, 1914, the work under contract was resumed and continued until August 12, when it was brought to a satisfactory completion and during that period a quantity of 760 cubic yards, scow measure, of mud were removed.

The total amount paid to contractors under this contract was $7,098.40, made up as follows:—

| | |
|---|---|
| During 1913-14, 36,600 cubic yards, scow measure at 19 cents | $6,954 00 |
| During 1914-15, 760 cubic yards, scow measure at 19 cents | 144 40 |
| | $7,098 40 |

The total amount of material removed by dredging under this contract, is 37,360 cubic yards, scow measure, and as this material in place amounted to 32,095 cubic yards, the expansion factor was 16·4 per cent.

WILLOW COVE.

Willow cove, Queens county, is about two miles southwest of Port Mouton. It is a small cove, used by the fishermen. During the lobster season, 14 gasoline boats use this place as a basis of operation. On the northern side is situated a lobster factory. The entrance was almost closed by the presence of reefs, which ran out from each side towards the channel, and along the channel were located several large individual rocks. These have been removed, and a channel about 60 feet wide has been cut through the stone to a depth of 6 feet L.W.O.S.T. A diving outfit, consisting of the steamer *Coast Guard,* with a crew of nine men, three of whom are divers, fitted with pneumatic appliances was engaged at the rate of $90 per day, to perform this work, and it has been satisfactorily performed.

During the period of operations, they removed 989 tons of stone, which was mostly of blue whin, a considerable portion of it being gneiss rock. As this locality is situated practically on the border line separating the granite from the diabase geological belts of Nova Scotia, the prevalence of the two different rocks is thus accounted for. As this is very heavy stone, 13 cubic feet will practically make a ton, and the weight was calculated on that basis. The total cubic yards removed were 476½, so that the cost per cubic yard was $6.29, or per ton $3.03. This work was commenced November 17, and completed February 22, 1915.

Spring tides rise 6½ feet, neap 4½ feet.

WINDSOR.

Windsor, Hants county, is an incorporated town situated at the head of Minas Basin on the Avon river. It is the terminal for the Midland Branch of the Dominion Atlantic railway. The distance from Halifax is about 46 miles, and the population is 4,500. In the neighbourhood are extensive gypsum quarries from which about 120,000 tons of gypsum are annually exported to the United States, and two or three million feet of lumber are also shipped from here annually by water.

*Training Weir.*

Up to about 1890, the wharfs of the town were comparatively free from mud, and at high water large vessels could lie alongside and discharge or load. Owing to the construction of a new highway bridge, however, mud began to accumulate in front of the wharfs. With the object of scouring away this deposit, the department, during the year 1897-8, began the construction of a training weir, which is constructed of cribwork, filled with stone, with a brush mattress foundation. In the year 1900-01, the sum of $2,173.74 was expended in completing the work, which is 600 feet in length. In the year 1901-02, $2,725.93 was expended in extending the work another 100 feet and in making repairs. In 1903-04, the sum of $98.71 was expended in placing a small quantity of hardwood sheathing on the outer end of the weir, and in 1904-05, $53.07 was expended in replacing some of this sheathing. In 1908-09, the sum of $400 was expended in extending and repairing the outer end of the weir.

*Old Wharf.*

Sometime between the years 1854 and 1860, the Provincial Government of Nova Scotia built a wharf of cribwork as an adjunct to the railway from Halifax to Windsor, then called the Nova Scotia railway. Since Confederation, at which time the railway passed to the control of the Federal Government, the wharf has been maintained by the Department of Railways.

In 1907-08, the Department of Public Works expended the sum of $6,174.07, including $2,680 paid to the Department of Railways for hauling earth by train for filling in and rebuilding the outer 5 feet in height of the wharf. To render the approach to the wharf more convenient, an area of about half an acre of low ground at the back of the work was filled with earth and gravel to the level of the floor of the work. In 1908-09, the sum of $5,046.22 was expended in the removal by hand dredging of a quantity of mud from in front of the wharf. During the year 1910-11, the sum of $2,538 was paid for the removal of 3,975 cubic yards mud from in front of the wharf.

In the fiscal year 1912-13, the sum of $382.62 was expended in the purchase and placing of new angle irons on the corners of the wharf and in making miscellaneous repairs to the flooring.

*New Wharf.*

During the fiscal year 1914-15, the department purchased property, including a wharf and coal shed, from Mr. E. H. Armstrong of Windsor, N.S., at a cost of $7,500. This wharf is situated about 150 feet in a southerly direction from the railway wharf. During the year, the sum of $500.30 was expended in making general repairs, consisting of tearing down the top of the wharf for a depth of 4 feet for a length of 118 feet and over the whole width of 70 feet and rebuilding with new material.

Work commenced, July 21, and was completed August 25, 1914.

*Dredging.*

Since the fiscal year 1908-09, it has been found necessary nearly every year to make an expenditure for the removal by hand dredging, of mud from the front of the Government wharf. In 1908-09, the sum of $5,046.22 was expended for this purpose; in 1910-11, the sum of $2,538; in 1912-13, the sum of $3,000; in 1913-14, the sum of $2,520. The amount removed each year varies from 3,000 to 5,000 cubic yards.

During the season of 1914-15, the contract was awarded to Mr. W. W. Shaw of Windsor. The area of the work was 1·47 acres, the material removed is tough, clayey mud. The average depth of the cutting was 1·3 feet to give a depth of 20 feet below the top of the wharf, the object of the work being to provide sufficient depth of water for vessels berthing at the wharf.

The work was carried out on a place measurement basis, the amount removed being 3,083½ cubic yards, place measurement. As the work was done by hand, no dredges were employed. The rate of payment was 60 cents per cubic yard, and the period of operation was from June 15 to July 23 and from October 22 to November 28.

YARMOUTH.

Yarmouth harbour lies about N.N.E. and S.S.W. (true) and from the upper wharves to the mouth of the harbour is nearly 4 miles. At about the middle of its length and for a distance of about ¾ of a mile, it is protected from the main waters of the Bay of Fundy by a beach of gravel and shingle, connecting Cape Fourchu, an island, or more precisely a peninsula, with Stoney point, the southern extremity of the mainland, forming the western side of the harbour.

In 1867, the Provincial Government began the construction of a beach protection work at Stoney point, and between 1873 and 1875, the Department of Public Works built the remaining thousand feet to reach the north end of Cape Fourchu.

Since 1875, the department has made numerous expenditures in repairs, renewals and extensions, full particulars of which will be found in the departmental reports for 1911-12 and 1912-13.

In 1913-14, the sum of $71.84 was expended on the renewal of about 1,000 feet b.m. of planking, and the respiking of other planking.

In 1914-15, the sum of $4,011.98 was expended in forming an opening through the beach protection and protecting it on the western side, and outer or seaward face, by a groyne 60 feet long, 21 to 25 feet wide and from 16 to 18 feet high, of substantial crib-work. On each side of the opening, a new block of crib-work was built 22 feet long, across the work, 10 feet wide and 19 feet high. The inner or harbour side of the opening was protected by two small blocks of crib-work 45 feet long, 6 feet wide and 6 feet high. The opening through the protection work for the passage of boats was deepened by hand digging, the excavation being 60 feet long, 38 feet wide on the outside and from 2 to 8 feet deep.

*Dredging.*

In 1914-15, the Maritime Dredging and Construction Co., Ltd., of St. John, N.B., under special agreement, removed 10,096 cubic yards of sand and mud, scow meaasurement, at 40 cents per yard, by their spoon dredge *Beacon Bar,* from the Evangeline dock, so-called, in front of the D.A. Ry. wharf. The work was begun on 3rd of October, and finished on 4th of November, 1914. Spring tides rise 13 feet.

The object of the work was the improvement of the docking and berthing facilities of the Boston steamers.

The dimensions of the dredged area are approximately 175,500 square feet comprised in a length of 550 feet and a width of 220 to 450 feet. The dredging was carried to a depth of 20 feet below L. W. O. S. T.

YOUNG'S COVE.

Young's cove, Annapolis county, is a small fishing and farming settlement of about 100 people, situated on the coast of the Bay of Fundy, about 2½ miles south-west from Hampton.

In 1914-15, the sum of $3,984.97 was expended in building a breakwater for the protection of the fishing boats. The work is 180 feet long, from 20 to 25 feet wide and from 6 to 20 feet high, built of substantial cribwork. It is not quite finished and will cost about $200 to complete it.

## PRINCE EDWARD ISLAND.

ALBERTON.

Alberton wharf, Prince county, is situated on the northeast coast of the island in Cascumpeque harbour. The place is about 55 miles by rail from Summerside and is one of the most important shipping points in Prince county. As there are only three wharves at the place, viz.,—J. H. Myrick's & Co.'s (private), Railway wharf and Alberton wharf, the need of shipping facilities was felt, when the local government allowed the last-named to get out of repair. This wharf is in the shape of a "T," having an approach 20 feet wide by 463 feet long, and a pier head 122 feet long by about 30 feet wide.

During the present season, the property was transferred to the department by the local government, and its reconstruction (estimated at $5,000) was commenced. Owing, however, to difficulty in procuring suitable material, commencement was delayed until October 21, when by January 21 396 feet of the approach had practically been all reconstructed at a cost of $1,983.07 and operations suspended.

The approach, formerly consisting of a number of blocks and spans, has been built solid with the exception of the two outer spans, the foundation being of poles with square timber top, full ballasted and having a roadway of broken stone and gravel, fender piles being placed along its sides every 10 feet.

ANNANDALE.

Annandale is situated on the north side of the Grand river near its entrance into Boughton bay, the river being navigable for large vessels a distance of 4 miles above Annandale and for smaller craft 7 miles. It traverses and affords shipping facilities for a large and fertile farming district. Of late years, the "Sand Bar" about one mile out from the river's entrance, and over which from 4 to 6 feet at low water spring tides could generally be carried, was found to have shoaled considerably, preventing vessels of the larger class reaching Annandale.

To facilitate the movement of farm produce during the past fall, authority was given October 1 to place the dredge *Montague* on the bar, in order to give some temporary relief for the time being. Operations were commenced October 7, extending till November 7, much delay, however, being caused by stormy weather. During this time, 6,400 cubic yards, scow measurement, of chiefly hard sand were removed in making cut through the bar, having a length of 800 feet, with average width of 50 feet; this directly on line of range lights, leading over best water on the bar. The depth made was 10 feet at low water spring tides, that here rise 5 feet.

It is proposed further widening this cut during early part of coming season, when weather conditions will likely be more favourable. While some silting in may be expected from time to time, the work, when completed, should prove of much benefit to the larger class of vessels now desiring to call at Annapolis and other places on the Grand river.

ASYLUM WHARF.

The "Falconwood Asylum," maintained by the Government of Prince Edward Island, is situated on the north bank of the East or Hillsborough river, about one and a half miles by water east of Charlottetown. Previous to 1906, the local Government was obliged to have its coal supply, of upwards of 2,100 tons, for the asylum, carted from the wharves at Charlottetown, a distance of over three miles. To obviate this, a wharf was constructed, extending out to about low water mark. To this, the same and following seasons, the department dredged a cut from the channel, or deep water, 750 feet long, 50 feet wide, and carrying 6 feet at low water spring tides, or 15½ feet at high water spring tides, which here rise 9½ feet; since then, about every two years, the cut has required cleaning out, its course being directly across the current, and very liable to silting and filling in with seaweed, etc.

No work having thus been done since 1912, some cleaning out by the dredge *Prince Edward* was undertaken during present season but had to be discontinued, owing to the press of other work. Operations were commenced August 7 and suspended August 20, 1914, 4,150 cubic yards of sand and mud being removed of the 9,000 cubic yards authorized.

BAY VIEW.

Bay View wharf, Queens county, is situated on the Hope river, near its entrance into the southeast side of New London bay. The wharf has a length of 511 feet, the outer 105 feet or pier head, being 35 to 26 feet in width, the approach 406 feet long, having a width of 20 feet.

During the present season, the repair and strengthening of the approach and raising of pier head was undertaken on August 3, and completed October 27; the work consisted of the raising and renewal of four to five tier of face timbers on pier head; new ties being put in; floor stringers raised 1¾ feet, and about 5½ M. b.m. of new plank laid; two tier of wall timbers, as well, being renewed on adjoining 100 feet of approach. In addition, some 70 new piles were driven, where required, and new curbing and mooring posts placed, while roadway of approach was made up and graded with broken stone and gravel. The cost of work was $940.73.

*Dredging.*

To facilitate approach to the wharf at all stages of the tide, 4,800 cubic yards, scow measurement, of sand and mud were removed by the departmental dredge *Montague,* which worked at the place September 12 to September 20, making a cut 150 feet wide and 350 feet long, carrying 9 feet at low water, spring tides here rising 3½ feet.

BAY FORTUNE.

Bay Fortune breakwater, Kings county, is situated on the east coast of the island, at the entrance of the Fortune river, into Fortune bay. The work is as fully described in departmental report of 1908.

During the present season, the necessary repair and raising of the outer 400 feet of the breakwater was undertaken, two tier of square timber being placed on the channel face, cross-ties and longitudinals being put in, the work further strengthened by piling as required and full ballasted with rock ballast. Work was commenced August 25 and completed November 10, the total expenditure being $1,995.87.

BELFAST.

Belfast, Queens county, also known as Halliday's wharf, is situated on the south side of Orwell bay, about one mile north from the village of Eldon. Its construction, dimensions, etc., are fully described in departmental report of 1905-06.

During the present season, June 23 to October 21, the whole outer face of the pier head or return was reconstructed and strengthened by the driving of creosoted bearing piles, placing of walings and this close-piled; the western wall for a distance of about 60 feet, being, as well, further strengthened. New planking and floor stringers were laid on a considerable portion of the pier head, the approach being made up, where required, with broken stone and gravel. The total expenditure on the work was $1,902.76.

*Dredging.*

To facilitate this traffic, during a portion of past season, August 24 to September 18, the departmental dredge *Prince Edward* was employed in cleaning up the approach to and shipping berth at east end of the wharf, 10,000 cubic yards, scow measurement, of soft mud being removed. The total area worked over was, 41,500 square feet to an average depth of 9 feet at low water spring tides, the work in front of the wharf having a width of 160 feet and length of 250 feet. The berth at east end of the wharf was also cleaned up and widened to 45 feet for a length of 40 feet, carrying a depth of 10 feet at low water.

BELLE RIVER.

*Dredging.*

Belle River is situated on the south side of the island about 4 miles from Wood islands and 6 miles east of the entrance of Pinette. The harbour is formed by piers or breakwaters on either side of the entrance, and two small shipping piers some distance within, a third pier being constructed by the department on the north side of the river during season of 1912-13.

During the present season, the small departmental dredge *Pownal* was employed in deepening the water in channel and approach to 4 feet at low water spring tides, here rising 7 feet. Operations were commenced June 22 and completed October 26, 15,277 cubic yards, scow measurement, of sand, mud and boulders being removed. Owing to the narrow width of cut and to the lack of depth to float the plant at low water, it was necessary to overcast but not redredge 1,725 cubic yards of material in connection with the

work. The total length of cut made was 1,070 feet, having an average width of 45 feet, which extends about 250 feet beyond the west breakwater.

Owing to the shifting nature of most of the material dredged, some silting in may be expected; in the meantime the improved depth of water will be of much benefit to the many vessels and small boats that frequent the harbour.

BONSHAW.

Is situated at the head of navigation for small boats on the West river, about 15 miles west from Charlottetown. Navigation of the river has been greatly impeded by the presence of snags, stumps, logs, slabs, etc. For improvement, the removal of these from the channel was undertaken, where possible, during the fall of 1913, at a cost of $367.57. That then done being found beneficial, some further work was undertaken the present season, being carried on as tide and weather permitted from September 6 to November 3, during which time 967 snags, logs, etc., were removed from the river, at an expenditure for season of $252.51.

CARDIGAN RIVER.

*Dredging.*

The Village of Cardigan Bridge is situated at the head of navigation on the Cardigan river. Here are situated the wharves used in the shipment of surplus farm produce of the surrounding districts. Upward of the Dominion Government wharf, known as Lewis' Point wharf, situated about half a mile below the bridge, the channel is narrow and crooked, in places partially obstructed by protruding shoal points, making the approach of the different wharves difficult for vessels of the larger class. To somewhat alleviate this, the departmental dredge *Montague*, during the fall of 1913, removed some 8,300 cubic yards of sand and mud from the south and east sides of the channel.

To further improve the river, the same dredge commenced operations on November 16, completing December 9, in which time 14,000 cubic yards, scow measurement, of mud and clay were removed, in further widening a portion of the river channel on each side, between Lewis' Point and McDonald's wharf, a distance of some 1,200 feet. A berth and turning basin for vessels was also formed near east side of McKenzie's wharf. The dredging done was to 12 feet at low water spring tides. It was necessary to overcast 600 cubic yards of material, but not redredge it, in forming the berth, etc. at McKenzie's wharf.

CARDIGAN SOUTH.

Cardigan River (south) pier, Kings county, is situated on the south side of the Cardigan river, a short distance above its entrance into Cardigan bay, and distant by land about 1½ miles north of Georgetown, or 6 miles by water; it was constructed by the Provincial Government many years ago, but having become unserviceable and the Provincial Government unwilling to effect repairs, was then transferred to the Dominion Government, who entered into a contract, October 28, 1913, with the Annandale Lumber Company, Ltd., for the sum of $9,637. Work was commenced February 16 and satisfactorily completed August 29, 1914. It consisted in the reconstruction of approach 315 feet long, construction of extension 40 feet, pier head 70 feet in length and two guide piers, each 90 feet in length by 20 feet wide, forming dock. All new work has pole foundation and close-face square timber superstructure, fully ballasted pier head being floor stringered, planked over and fitted with suitable incline and landing slip for accommodation of ferry steamer.

*Dredging.*

The foundation for guide piers were prepared by the dredge *Montague*, during fall of 1913, when some 8,300 cubic yards of mud and sand were removed.

To further improve the approach to pier and form a shipping berth on west side of the wharf, the same dredge, during past season, operated at this place from June 16, to July 9, and July 13-14, removing 10,100 cubic yards, scow measurement, of mostly hard sand in forming a berth 90 feet long by 50 feet wide along outer portion of west guide pier, and cleaning up approach to wharf 250 feet in length by an average width of 150 feet to 8 feet at low water spring tides.

CHARLOTTETOWN.

*Dredging.*

Charlottetown, the capital of the province, with a population of over 12,000, is situated on the north bank of the East or Hillsborough river, near its junction with the North and West rivers, here forming one of the finest natural harbours in North America, affording ample shelter for shipping of the largest class. On representations being made to the department of the need of a marine slip, surveys were made and a site selected as the most suitable location, as fully described in departmental report 1913-14.

Contract for dredging approach to and seat for proposed slipway was awarded to Mr. V. T. Bartram, of Toronto, March 23, 1914, for the removal of 130,000 cubic yards, place measurement, of sand and mud, at 28 cents per cubic yard. Work was not commenced until October 16, when dredge *McDougall* began operations, continuing up to November 14, on which latter date she suspended operations, removing in all 30,886 cubic yards, place measurement, and 2,850 cubic yards overcasting. The dredge *Edmund Hall* then took up the work and continued operations until December 15, when suspended for season, owing to ice conditions in the harbour.

The total amount of material removed by both the above dredges was 48,770 cubic yards, place measurement, leaving the balance of contract, consisting of 81,230 cubic yards, to be completed coming season. The cost of the work done was $15,212.75, made up as follows: 48,770 cubic yards at contract price of 28 cents, 4,204 cubic yards of overcasting at 18¾ cents per yard, 44,269·7 cubic yards overtow at 1 cent per yard and inspection, $329.70.

The area worked over was principally the approach to proposed slip, having a length of 520 feet and average width of 250 feet, this is to be dredged to 20 feet at low water. When operations were suspended, it carried a depth of 17 feet. A small portion of the area to be dredged to rock for the foundation of slipway was also worked over.

The dredge *Prince Edward* having wintered at Charlottetown and undergone repairs, commenced operations June 20 at the "Queen's Dock," situated immediately between the wharf property of Messrs. Buntain, Bell & Company and Mr. Charles Lyons. The work completed August 5, consisted in the removal of 12,300 cubic yards, scow measurement, of soft mud and clay, forming a berth between the two wharfs 400 feet in length with average width of 60 feet, the first 200 feet carrying 15 feet at low water, the balance grading from 15 to 7 feet. Spring tides rise 9½ feet.

CHINA POINT.

China Point wharf, Queens county, is situated on the west side of the Orwell river, near its entrance into Orwell bay. Originally built by the local government, its control was assumed by the Dominion in 1884. Its dimensions, etc., are described in departmental report of 1912-13.

During the present season, some small repairs to the floor stringers and planking of outer span and pierhead were effected, some making up of the clay roadway on approach was also done. The work was commenced on June 19 and completed August 26, and the expenditure was $253.21.

CLIFTON.

Clifton pier, Queens county, is situated on the south side of the Southwest river, about 2½ miles from its entrance into New London harbour, and immediately below the public bridge, crossing the river at this point.

The wharf has a length of 260 feet, the approach, 200 feet long, and 20 feet wide, was formerly composed of a series of blocks and spans, these latter having since been filled in with poles.

During the past season, the pierhead, having a length of 60 feet and width of 25 feet, which had been considerably damaged by late fall storms, etc., was reconstructed as also the walls of approach, the work being commenced June 29 and satisfactorily completed October 31 at a cost in all of $1,135.67.

COVE HEAD.

Cove Head Harbour, Queens county, is situated on the north coast of the island, about midway between Rustico harbour to the westward and Tracadie harbour to the east. The place is as fully described in departmental report of 1912-13.

During the past few seasons, a small channel having formed round the end of the shear dam, and running out to the eastward of main channel, it was decided to somewhat extend the shear dam in order to confine the outflow of water to the one channel and there derive all the benefit possible from scouring.

Work was commenced September 1, 1914, on an extension 96 feet in length and 15 feet in width on top of round log crib-work, fully ballasted and top planked over, outer end being close-piled, and the work was satisfactorily completed on November 19; total expenditure for the fiscal year being $2,502.50.

FRANKLIN POINT.

Is situated on the west bank of the North river, within, and immediately opposite the entrance to Charlottetown harbour. For accommodation of lots 30, 31, 32 and generally southwestern portion of Queens county, a contract was entered into December 5, 1912, with Messrs. McEwen, Coffin & Webster for the construction of a ferry and shipping wharf. Work was commenced May 8, 1913, and completed September 8, 1914.

While the wharf, as constructed, has a length of 658 feet, extending out to a depth of 10 feet at low water spring tides, some dredging is necessary to provide shipping berths on the sides of the piers, and berth for ferry boat in the "dock."

During the past season, November 13 to 23, and December 1, the departmental dredge *Prince Edward* removed 1,050 cubic yards, scow measurement, of sand and clay, in providing a berth between the two guide piers for the ferry steamer, carrying 8 feet at low water spring tides. The work on the shipping berths is proposed being undertaken next season. Owing to the narrow width of dock and in order to facilitate the work, it was necessary to overcast 400 cubic yards of material; this being deposited over the sides of the guide piers by hand. The area worked over has a length of 100 feet and average width of 50 feet.

No further dredging of the dock should be required. Surveys on completion of the work show a ratio of 1 to 1·31 as compared with scow measurement returned. Spring tides rise 9½ feet.

FRENCH RIVER.

*Dredging.*

French river empties into the western side and near the mouth of the New London bay, on the north side of the island. At the head of navigation on the river, about one mile above its entrance, the department in 1913, reconstructed the old property known as "Simpson's wharf," as fully described in departmental report 1913-14, the property having been purchased by the Department for $300. During the present season, the departmental dredge *Montague* was employed in enlarging turning basin and forming shipping berths at the wharf. Operations were commenced August 7 and completed August 15, 4,200 cubic yards, scow measurement, of sand and mud being removed. Owing to lack of depth to float plant, 1,200 cubic yards of material had to be overcast, 600 of which were afterwards scowed away.

The berth on the east side of the wharf has a width of 80 feet and length of 90 feet, grading from 9 feet at low water spring tides at its outer end up to 5 feet, while that on the west side has a length of 90 feet and average width of 60 feet, carrying 9 feet at low water.

The approach to wharf on the west side of the channel was widened and improved by a cut 350 feet in length, having an average width of 60 feet, carrying 9 feet at low water spring tides.

The dredge then proceeded to the mouth of the river and on August 17 commenced work on widening, straightening and deepening the channel entrance for a distance of about 1,200 feet and width of 40 feet to 9 feet at low water spring tides; work being completed August 28, 10,200 cubic yards, scow measurement, of sand and mud being removed.

GRAHAM'S POND.

Graham's pond, Kings county, is situated on the east coast of the island, about five miles south-east of entrance into Cardigan bay, also about same distance from entrance to Murray harbour.

The pond and harbour works are as described in departmental reports of 1907-08-09 and 1912-13. During the past few years, the works, originally of very light and inexpensive construction, had been about entirely rebuilt except for a short distance on the inner end of each of the piers. During the present season, this has been accomplished, putting the whole of the works now in good and serviceable condition. Work was commenced July 15, and completed 30th September at a total cost of $1,491.82.

GRAND RIVER.

Grand river wharfs are situated directly opposite each other near the entrance of the Grand river into Richmond bay, the wharf on the south side being nine miles from Summerside, the shiretown of Prince county, the distance between the two wharfs being some two thousand feet. Originally built by the Provincial Government and being of poor construction, they very shortly after completion became so injured as never to be of use for shipping purposes but proved of much benefit as a shelter and for the ferry service between them, maintained by the Provincial Government. Latterly, both works were transferred to the Dominion Government, reconstructed and put in good and serviceable condition for shipments, as fully described in departmental report of 1913-14.

To facilitate the landing of the small ferry boat, the construction of two slips on the upper side of each wharf was authorized July 2. Work was commenced September 1 and carried on under scattered dates until March 10, when completed at a total cost of $1,434.06.

Each slip is built in the form of a "V," having an approach 40 feet long by an average width of 18 feet, this of pole-work foundation with square timber superstructure, ballasted with stone and having top graded with gravel and clay. The guide piers, constructed of pile bents, have a length of 40 feet and width of 8 feet, waled, capped and sheathed on the inner side with three inch plank.

### HIGGIN'S SHORE.

Higgin's Shore pier is situated on Egmont bay, about 10 miles north of Cape Egmont, and about six miles from Richmond station on line of Prince Edward Island railway; it was built many years before Confederation and one of the Prince Edward Island piers, the control of which was assumed by the Dominion Government in 1884, its description, etc., being fully described in departmental reports of 1908-09-10.

During the past season, the sum of $150 was expended 14th July to 7th August, effecting repairs which consisted in making up of the washout that had occurred in roadway of the pier with broken stone and gravel, and general repair to portions of covering on the pier head.

### HURD'S POINT.

Hurd's Point pier, Prince county, is situated on the southern side of Bedeque or Summerside harbour, being one of the Prince Edward Island piers, control of which was assumed by the Dominion Government in 1883-84. The work is as fully described in departmental report of 1912-13.

During present season, some necessary repairs to the planking and stringers of outer portion of approach were effected, some 10½ M. b.m., of 3-inch plank being laid. Work was commenced October 15 and completed October 24, at a cost of $286.52.

### KIER'S SHORE.

Kier's Shore pier, Prince county, is situated on the eastern side of Richmond bay, also known as Malpeque harbour. The wharf has a length of 1,033 feet, and is used by the district for shipment of farm produce, fish, etc., and imports of coal, limestone, lumber and general merchandise.

During the present season, August 18 to September 1, some small repairs were effected to the planking on the pier head, the clay roadway of approach also being made up with broken stone, and the expenditure amounted to $114.91.

### LAMBERT'S PIER.

Lambert's Pier, Montague, Kings county, is situated at the head of navigation on the Montague river, immediately below the bridge. The wharf extends along the channel, and parallel to it a distance of 310 feet, having a width of 24 to 25 feet It is composed of a series of bearing piles, capped, floor-stringered and planked, there being, as well, an open face crib extending along the back of the work to prevent land wash.

During the present season, some necessary temporary repairs were effected to portions of the planking and floor-stringers. Work was commenced September 9 and completed September 22 at a cost of $123.53.

### LITTLE SANDS.

Little Sands wharf, Kings county is situated on the south side of the island, about 8 miles west of Cape Bear and four miles east of Wood Islands harbour. The place is as described in departmental report of 1913-14.

An order-in-council was passed January 13, 1914, authorizing the acceptance of the tender of Messrs. Phillips, Mntch & McLean, for the construction of a close-face square-timber crib wharf of 240 feet in length by 30 feet in width on top, together with necessary excavation and grading of approach, etc. Work was commenced by the contractors on May 8 and carried on continuously to satisfactory completion October 2. The total cost of the work on unit basis was $18,484.62.

### M'ARTHUR'S LANDING.

McArthur's Landing, Queens county, is situated on the West river, about 13 miles from Charlottetown, and about 2 miles above West River bridge. In response to the desire of the people of the district for facilities for making shipments in small boats, a survey was made and plan and estimate forwarded the department October 10, 1913, for a small landing on site of a former one which was allowed to get completely out of repair. The property was tranferred to the department by the Local Government, and work commenced October 19, 1914, and completed November 30 at a cost of $566.66.

The work consisted in repairing the old approach, having a length of 60 feet and width of 22 feet, and the construction of an additional head-block 25 feet by 30 feet, built of pile bents, capped, floor-stringered and planked over; faces and ends of which are fender piled at 5 foot centres.

### M'AULAYS.

McAulay's Wharf, Queens county, is situated on the north bank of the Pinette river, near its entrance into Northumberland straits. Originally constructed by the Provincial Government many years ago, its repair had of late years been entirely neglected. The need of shipping facilities at the place being felt, the property was transferred to the department and a contract let to the Annandale Lumber Company, Limited, on October 28, 1913, for its reconstruction, for the bulk sum of $7,438.

The wharf, consists of approach 625 feet long, 20 feet wide, having close-laid pole-work foundation, square timber superstrncture, clay roadway and the sides fender piled at 10 feet centres, and a pier head 50 feet by 30 feet, of similar construction but floor-stringered, planked over and close piled; the work extending out to about the edge of the channel. Work was commenced by the contractors on September 9, and carried on almost continuously up to December 16, when it was satisfactorily completed.

### M'CONNOLL'S WHARF.

McConnoll's wharf is situated on the north side of the East or Hillsborough river, about 8½ miles from Charlottetown, and is the property of the Local Government. The wharf is used chiefly for ferry purposes, small shipments of produce also being made from it. Of late years, the water at its outer end has been gradually shoaling until at present it is dry at low spring tides. To alleviate this, the dredge *Prince Edward* before lying up for the season removed between November 25 and November 30, 1,100 cubic yards, scow measurement, of soft mud, making a cut from the deep water in the channel to end of wharf, 130 feet in length by 40 feet in width, carrying average depth of 7 feet at low water spring tides.

### MIMINIGASH.

Miminigash harbour, Prince county, is situated on the west coast of Prince Edward Island, about 15 miles south of North Cape and 18 miles north of West Point. Works for the formation of a boat harbour were commenced by the Dominion Government in 1878, and since coutinued from time to time till now consisting of piers or breakwaters on either side of the "Run," as fully described in departmental report of 1912-13.

During the present season, some repairs were effected to the covering of the southern work, and the face of the northern work, near its inner end, the close and fender piling throughout, as well, being renewed as required. Work was commenced September 1 and completed October 26, at a cost of $999.22.

MOUNT STEWART.

Mount Stewart, Queens county, is situated at the head of navigation on the East or Hillsborough river, about 18 miles east of Charlottetown. The village of Mount Stewart has a populaton of about 500 with thickly settled surrounding districts. For improvement of shipping facilities at the place, suitable wharfage accommodation was provided by the department in 1908, as described in departmental reports of 1908-09-10; considerable improvement, as well, having been done by dredging the channel, formerly carrying only about 2 feet at low water spring tides, as described in departmental report of 1913-14.

During the present season, September 9 to 23, some small repairs to the clay roadway of the wharf approach, were effected at a cost of $174.75.

MURRAY HARBOUR.

South river is situated on the southeastern extremity of Kings county emptying into Northumberland straits, and draining a very rich agricultural country.

Considerable improvement was made on the upper part of the river, from what is known as the "Narrows," to the bridge, some twenty years ago by the departmental dredge *Prince Edward,* the channel being straightened and deepened. Of late years, this has been gradually silting up, also the lower part becoming more difficult of navigation; for improvement of which, a contract was entered into June 16, 1913, with Mr. V. T. Bartram for the removal of 58,000 cubic yards, scow measurement, of sand and clay, at 24 cents; work being commenced with the *E. B., No. 1,* on July 15. As Mr. Bartram had been awarded a contract for dredging at Rustico harbour, which work, owing to its exposed situation, was only possible to perform during the fine weather months, the dredge *E. B., No. 1,* suspended operations end of August to take up the work at Rustico, but was lost on her way to the place. The contractor then brought the dredge *Edmund Hall, No. 1,* to the district with the intention of completing his contract at Murray harbour before close of season. Owing, however to the late arrival of this dredge at Charlottetown, no work was attempted, the dredge taking up winter quarters. A time extension of contract being authorized, the dredge *Edmund Hall, No. 1,* proceeded to Murray harbour and commenced operations May 12, satisfactorily completing the work June 5, 1914, during which time 36,098·6 cubic yards, scow measurement, of mud and clay were removed, in widening the entrance and reducing the different points in the river, giving a good channel about 1 mile in length and seventy to eighty feet in width, carrying 10 feet at low water spring tides.

Total quantity of material removed during both seasons was 59,559·9 cubic yards at a cost of $14,293.21, with an additional sum of $316.20 for inspection.

The expenditure during past season was $8,663.66, with an additional sum of $169.80 paid for inspection.

NEW LONDON.

New London Harbour, Queens county, is situated on the north coast of the island, about midway between entrance to Richmond bay to the west and Rustico harbour to the east. The bay is about 3 miles long and nearly as broad, receiving the waters of the French, Southwest, Stanley and Hope rivers, all navigable for at least short distances and having at them wharfs or shipping places, all giving shipping facilities

to rich agricultural districts. The harbour is also used as a place of refuge by the fishermen using the waters in the vicinity, being convenient to some of the best fishing grounds in the Gulf of St. Lawrence.

Improvement of the entrance was first commenced in 1878 by the department, and since carried on as described in departmental reports of 1908-09 and 1912-13.

During the season, the sum of $1,206.18 was expended in rebuilding and strengthening outer faces of the outer block, and making up brush and stone filling in portions of the beach protection. Work was commenced July 2 and completed October 30.

NEWPORT.

Newport or North Cardigan, is situated on the north side of the Cardigan river, a short distance above its entrance into Cardigan bay, and about 5 miles by water below the village of Cardigan Bridge. It is one of the Prince Edward Island piers assumed by the Dominion Government in 1884, since when it has been about entirely rebuilt by the different repairs and improvements effected from time to time, as fully described in departmental report of 1904-05.

During the past season July 10, 11 and 15 to 21, the departmental dredge *Montague* removed 3,500 cubic yards, scow measurement of sand and mud in improving the berths at outer ends and sides of the wharf, a depth of 12 feet at low water spring tide being provided over that on the west side, 100 feet long by 40 feet in width, while on the eastern side, the outer 100 feet is 50 feet in width and carries 12 feet, the adjoining 100 feet inward grading up to 8 feet at inner end.

NORTH RIVER BRIDGE.

North River Bridge wharf, Queens county, is situated at the head of navigation on the North river about 4½ miles north by water from Charlottetown. Shipment of surplus farm produce and import of coal, lumber, limestone, etc., was formerly had by means of the public road bridge here crossing the river; its replacement by a steel structure, however, prohibited its further use for shipping purposes, and to supply the need so caused, the construction of a suitable shipping pier, immediately below the bridge, was undertaken by the department.

A contract for the bulk sum of $3,490 was entered into October 28, 1913, with Mr. Joseph Hughes, for the construction of a wharf, consisting of shore abutment or approach, 180 feet long by 20 feet wide of pole-work bottom, square timber top and clay roadway, and a pier head 80 feet long and 30 feet wide of similar construction to approach with its top floor-stringered and planked over, and outer end close-piled. Work was commenced May 29 and carried on from time to time until December 10 when satisfactorily completed.

PANMURE ISLAND.

Panmure Island is situated on the south side of the entrance to Georgetown harbour, on the east coast of Prince Edward Island. During 1904-05-06, the Department constructed a wharf on the south side of the island, on St. Mary's bay, and in 1907-08 added an extension to that originally constructed, as described in departmental report of 1907-08.

During the present season, the raising and strengthening of the outer end of the wharf was undertaken by day labour, to prepare for some dredging that is proposed by the department at the place. Work was commenced July 1 and completed October 15 at a cost of $998.36. The work done consisted of driving bearing piles at 7 foot centres on the outer 30 feet, these waled and close-piled, the top being floor stringered and planked and the adjoining 270 feet of clay roadway of approach was made up with broken stone.

PORT HILL WHARF.

Port Hill, Prince county, is a small settlement near the northwestern end of Richmond bay, and where, at the north end of what is known as "Cooper's Road," a site was selected for the construction of a small wharf for use in connection with a similar one built at Lennox island as a landing place for the Indians of the Reserve on Lennox island. The work constructed is as fully described in departmental report of 1911-12.

During the present season, in order to reach a better depth of water and give more room on the end of the wharf for the turning of teams, etc., the construction of an extension 40 feet long, by day labour, was commenced on September 28 and satisfactorily completed December 31 at a cost of $2,087.63. The block is constructed of pole work foundation with square timber superstructure, fully ballasted, having the top floor stringered and planked over, its sides being double fender piled at 10 feet centres.

POWNAL.

Pownal Pier, Queens county, situated on the northeastern part of Hillsborough bay, about 9 miles southerly from Charlottetown. The wharf was one of the original Prince Edward Island piers assumed by the Dominion in 1883-84, since when, as mentioned in departmental reports of 1907-08-09-10 and 1912-13, it has at different times required small repairs to keep it passable for traffic, owing to age, decay and effects of storms, etc.

During the past season, September 21 to October 10, some small repairs were effected to a portion of the walls, defective piling, flooring and span beams renewed where required and the clay roadway made up at a cost of $335.33.

ROCKY POINT.

Rocky Point wharf, Queens county, is situated on the south side of the West river, immediately within and to the west of the entrance to Charlottetown harbour. The wharf, used entirely at present for ferry purposes, serves the traffic between Charlottetown and the southwestern portion of Queens county, a steam ferry-boat plying on the service about half hourly. It is the property of the Local Government and being very old and of light construction became much out of repair. As a substitute and to accommodate shipping, an order in council was passed March 7, 1914, authorizing the acceptance of the tender of Mr. Harvey D. McEwen, at a unit price basis, for the construction of a wharf near the present provincial ferry wharf site, entailing an approximate expenditure of $31,749. This work when completed will have a total length of 600 feet, consisting of approach 325 feet in length by 22 feet in width, a pier-head 160 feet long; and two guide piers 115 feet long by 24 feet wide, forming dock, which is fitted with floats and an incline landing for accommodation of the ferry steamer.

The foundation of the wharf is of pole-work construction, with square-timber superstructure, filled with ballast excepting guide piers which are constructed throughout with 12 by 12 face timbers and protected with 10 by 10 hardwood sheathing on side forming dock. The middle portion, 115 feet in length, is floor-stringered and planked over.

Operations were commenced June 2 and carried on continuously up to October 26, when suspended for season; the approach 325 feet long was then completed, also portion of pier head. The amount expended on the contract during the season was $13,316.80.

RUSTICO.

Rustico Harbour is situated on the north coast of the island, about midway between North Point and East Point. The district contains a population of about

3,000 interested in agriculture and fishing (the place being one of the most important fishing stations on the island), the exports of which, as also imports of the coal, lumber and general merchandise amount to fully $100,000 annually.

The entrance to the harbour being obstructed by a shifting sand bar, carrying from 4 to 6 feet at low water, made navigation extremely dangerous, and only fit for small vessels. For the improvement of these conditions, so as to admit vessels drawing not less than 10 feet at all stages of the tide, a contract was awarded to Mr. V. T. Bartram, of Toronto, on August 22, 1913, for the removal of 10,000 cubic yards, in making a cut through the bar. During September, 1913, the contractor in attempting to reach the site lost his plant; work was, therefore, not commenced till June 19 of present season with dredge *Edmund Hall No. 1,* and completed July 16. The amount of material removed was 10,052 cubic yards, scow measurement, of sand, at contract price of 75 cents per yard; 955 cubic yards, place measurement were overcast at 35 cents per yard. The cost of the work, not including inspection, was $7,873.25. The cut made through the bar, directly on line of range lights, had a length of 850 feet and average width of 50, carrying 10 feet at low water spring tides, when completed. Its permanancy, however, is very doubtful, as the material dredged through was all sand of a shifting nature.

The contractor, while at the site, was authorized to clean out and deepen the channel in front of the fishing stages, immediately inward of harbour entrance; this work, commenced July 9 and completed August 3, has a length of about 1,150 feet and width of from 80 to 110 feet and entailed the removal of 17,001·2 cubic yards, scow measurement, of sand and mud, costing, at 28 cents per cubic yard, the sum of $4,845.34.

Work was commenced by day labour, November 13, on the construction of a small beach protection crib, inside the inner range light, this to prevent the sand from the beaches washing into the dredged channel. The work consisting of open-face round-log crib, 175 feet long by 13 wide, close-piled on channel face, partly ballasted and top planked over was satisfactorily completed January 9, at a cost of $1,971.30.

## SOURIS.

Souris Harbour, Kings county, is situated on the southeastern coast of Prince Edward Island about 6 miles southwest of East Point, and is most important as a harbour of refuge and place of shipment, for both of which it has been rendered available by the breakwater built and maintained by the Dominion Government, as described in departmental reports of 1899-1900 and 1908-09.

To enlarge the harbour area, both in the interest of the general business of the place and afford better refuge for coasting vessels, a contract was entered into October 18, 1912, with Messrs. Beazley Bros., of Halifax, N.S., for the sum of $143,917, for the construction of a 400 foot extension to the breakwater, of close-face timber work, the portion below half tide being of creosoted timber, all full ballasted, floor-stringered and covered with 4-inch plank; the seaward side being protected up to the height of high water with stone rip-rap work, having slope of two to one. The work was commenced May 31, 1913, and continued up to November 10, of the same year, when suspended for the season, that done consisting of the construction of a length of 360 feet to a height of one foot above low water; the estimated value being $60,180.

Work was commenced May 11 and carried on continuously up to November 28, 1914, when the contract was completed in accordance with the plan and specification, with the exception of replacing eight tier of the face timber in front portion of the outer block below the sloping face which were damaged during construction. The sum of $3,000 has been retained to cover this damage, as owing to lateness of season it was found impossible to make satisfactory repairs.

It is the intention of the contractors to make good all damage sustained, early in the coming season, when the work will be ready for final acceptance by the department. The total amount paid the contractors in connection with the work from its commencement up to March 31, 1915, was $140,917.

During the month of October, a breach in the south side of the outer block of the old work was thoroughly and satisfactorily repaired by the contractors for the extension, the work being done by agreement, at a cost of $650.

STANLEY BRIDGE.

Stanley Bridge, Queens county, is situated at the head of navigation on the Stanley river, about one mile above its entrance into the southern part of New London bay, and is the centre of a rich agricultural district, containing a population of fully 1,000, interested in the shipment of farm produce, and imports of coal, lumber, limestone and general merchandise.

A short distance below the bridge there is a bend in the channel of the river, and here a shoal had formed. During the past season, August 31 to September 11, the departmental dredge *Montague* was employed in removing the shoal to 12 feet at low water, and in somewhat receding the point of the bend, so as to afford a less difficult turn. During the time at work, 6,800 cubic yards, scow measurement, of mud, sand, etc., were removed; the area worked over having a length of 500 and average width of 100 feet.

STEVEN'S PIER.

Steven's Pier, Montague, Kings county, is situated on the south side of the Montague river, at village of Montague Bridge, the head of navigation on the river. The pier extends along the channel, and parallel to it a distance of 100 feet, the wharf proper having a perpendicular width 25 to 30 feet, the outer 20 to 25 feet of which is carried on bearing piles, capped, floor-stringered and planked, and the channel face fendered. The approach consists of two wings about 55 feet apart, constructed of close face-timber, extending out from the bank of the river, and being respectively 135 and 160 feet long; the space between them is filled with ballast, having clay roadway formed on top.

During the past season, the decayed bearing piles in the face were replaced by creosoted piling, new caps, floor-stringers and planking being put in. The walls of approach and retaining walls forming the back of the pier head were repaired with 12 by 12 timber where necessary, the clay roadway on approach also being made up. Work was commenced July 3, and completed September 18, at a cost of $998.42.

TIGNISH.

Tignish Harbour, Prince county, is situated on the northeast coast of Prince Edward island, about 8 miles south of North Cape, being at the mouth of the Tignish river, here entering the Gulf of St. Lawrence. Works for the formation of a boat harbour commenced at the place in 1868 by the Provincial Government and since confederation extended by the Federal Government, are now as described in departmental reports of 1908 to 1912-13. They consist of piers or breakwaters constructed on either side of the river's entrance, as also protection works over the long sand beaches on each side of the piers.

To facilitate shipments made from the village of Tignish, a small wharf or landing was constructed during the past season, at what is known as Jude's point, which is situated at the end of a public road leading directly from the village and about half a mile from the harbour entrance.

The work, which was commenced August 22 and completed October 31, consists of a headblock 40 by 40 feet, having pole-work foundation and square-timber superstructure, floor stringered and planked over. The approach is 20 by 30 feet of similar construction but with roadway formed with broken stone and gravel. The total cost of the work is $1,232.54.

TRACADIE.

Tracadie Harbour, Queens county, is situated on the north side of the island about 12 miles east of Rustico harbour and about 6 miles by road north of Bedford station on line of the Prince Edward Island railway, and from Charlottetown, the capital of the province, about 14 miles. Within the entrance, which has a width of about 900 feet, the harbour has a length of about 3 miles and width of about 1 mile, over all of which a depth of 12 feet of water, or better, is carried at low water. The place is largely used as a shipping station and harbour of refuge; owing, however, to its entrance being obstructed, generally by a shifting sand bar, it is found often only available for small vessels and fishing boats, and in fact, only, at time, admitting of the latter, although outward and inward of the bar there is a good depth of water. With the view, if possible, of improving this condition, a breakwater 1,000 feet long, costing $34,546, was constructed under contract on the eastern side of the harbour; the work being fully described in departmental report of 1912-13.

During the past season, the sum of $2,079.38 was expended in making up the ballasting where settlement had occurred, as also strengthening its outer portion with additional long piling, the work being commenced on July 7 and completed October 14.

VICTORIA.

Victoria Pier, Queens county, situated at the head of navigation of the Crapaud basin, at Victoria village, which, next to Summerside, is the most important place for shipments on the southern side of the island; the place is about midway between Charlottetown and Summerside harbours, and about 11 miles south of Emerald Junction on line of the Prince Edward Island railway. The control of the pier was assumed by the Dominion Government in 1884 and is fully described in departmental report of 1910-11.

During the past season, the eastern side of the wharf, immediately inward of the pier-head, was widened 15 feet for a length of 60 feet, the work being constructed of round-log open crib-work, ballasted, with top floor stringered and planked over. General repairs were also effected to the covering, roadway, mooring posts, etc., where required, to portions of the old work. The small freight shed, situated on outer end of pier, was, as well, lengthened 14 feet, its roof reshingled and the whole building put in good and serviceable condition. The work was commenced June 24 and completed October 31 at an expenditure for the fiscal year of $1,392.56.

*Dredging.*

During a portion of the season, September 25 to November 4, departmental dredge *No. 10* was engaged cleaning up approach to the wharf and forming shipping berths on either side, removing in that time 8,150 cubic yards, scow measurement, of sand, mud and shaley rock.

The berth formed on the east side has a length of 130 feet with average width of 60 feet, grading from 9 up to 6 feet at low water, while that on the west side has a length of 200 feet and width of 60 feet, grading from 9 to 2 feet at low water spring tides. The approach and turning basin in front of the wharf was also widened and cleaned up to an average depth of 9 feet at low water.

WEST RIVER.

West river (McEachern's) wharf, Queens county, is situated on the north side of the West river, which flows into Charlottetown harbour. It is distant from Charlottetown by water seven miles and by road eleven miles, surrounded by a rich agricultural district of some 250 people, interested in shipping facilities as also the maintenance of a ferry service at the place.

The old wharf, which had a length of 230 feet, was built by the Provincial Government many years ago, who for latter years having neglected its repair, had by 1912 become entirely useless as a shipping place. The Department having assumed its control, reconstruction was commenced August 23, 1913, but not carried on to completion during the year, owing to the difficulty in procuring suitable material; the work done is described in departmental report of 1913-14.

Work was again resumed August 19 and satisfactorily completed September 28; it consisted in widening the outer end of the wharf by the addition of a block 20 by 30 feet, having pole-work foundation with square timber superstructure, top being floor-stringered and planked over, this giving the pier head a length of 40 feet on the channel face. The further grading of approach for a distance of 90 feet was also completed and the outer block close-piled on front, the amount expended during the past fiscal year being $638.81.

WOOD ISLANDS.

Woods islands, Queens county, are situated about 30 miles southeasterly from Charlottetown, and 75 miles west of Cape Bear, being the most southerly point of Prince Edward Island.

For the formation of a small boat harbour at the place, works were commenced by the Provincial Government and since continued by the Dominion Government, until now consisting of two breakwaters; the northern breakwater extending from the mainland for a distance of 2,525 feet and the southern extending from the northern island a distance of 1,090 feet.

A contract was entered into 14th October, 1913, with Messrs. Townshend, Fraser & McQuaid for the sum of $6,975, for the construction of an extension of 100 feet to the southern breakwater; the work being commenced June 3 and satisfactorily completed September 2, consisting of a close-face square timber block 100 feet in length by 40 feet in width, averaging 16 feet in height, fully ballasted, top covered with 4-inch plank, outer corners being sheathed with 10 by 10 timber and protected with iron plating.

Portions of the covering on the northern block, which is used as a landing and shipping place, having become unsafe, through age, were repaired at a cost of $350.

## PROVINCE OF NEW BRUNSWICK.

### ALBERT.

Albert, Albert county, a village of 450 inhabitants, is situated on the Shepody, a tidal river with a strong current, practically dry at low water, discharging into the Bay of Fundy. Albert is the terminus of the Salisbury and Harvey railway, and is distant 45 miles from Salisbury, the junction with the Intercolonial railway. It is also a port of call for the steamer *Harbinger*, from St. John, and the steamer *Wilfred C* from Moncton. During 1913-14, the department constructed a wharf at Albert, consisting of a pier-head of close-faced cribwork, on a pile foundation, 100 feet long and from 40 to 50 feet wide, connected with the bank by a brush and gravel approach 234 feet long. A bed for vessels was also built in front of the wharf.

During 1914-15, the bed for vessels, on which considerable mud had accumulated, was levelled up sufficiently to allow steamers to ground. Owing to the difficulty in obtaining men, the bed was not entirely cleared of mud. It was also considered best not to perform further work until the spring, as it would again be necessary to clear the bed, even if the work were done in the fall; work was carried on from 13th to 19th of October, 1914. Expenditure for 1914-15, was $38.50.

### ANDERSON'S HOLLOW.

Anderson's Hollow, Albert county, on Salisbury Bay, near the upper end of the Bay of Fundy, is a shipping point for lumber especially, two million feet being shipped annually, beside some general merchandise. The work begun in 1879, and extended several times since that date, is a combined breakwater and wharf, 602 feet in total length and 25 feet in width on top. There is a depth of 17 feet at high water at the outer end, which is dry at low water.

During 1914-15, the top of the wharf, for a distance of 276 feet, was removed; such cross-ties and longitudinals as were rotten in the upper five tiers of the work were replaced with new timber; new stringers, a large portion of new covering and caps were placed on the work, and the break was renewed with timber, knees and iron braces. The berth inside the breakwater was also cleared of a considerable amount of gravel accumulated there.

Work was carried on during September, October and November, 1914, and March, 1915.

Expenditure for the fiscal year 1914-15, was $2,307.74.

### BACK BAY.

Back bay, Charlotte county, a fishing station about four miles west of L'Etang, and two miles east of L'Etite, is situated on an arm of L'Etite harbour. At Back bay, the provincial government built a wharf of crib and trestle work, 239 feet in extreme length, extending nearly to low water mark. An extension of 86 feet, giving a depth of 8 feet at low water, was added by the department in 1900-01.

During 1914-15, one thousand feet, b.m., of new covering were placed on the wharf. Work was carried on during two days in December, 1914.

Expenditure for fiscal year 1914-15 was $38.50.

BARNABY RIVER.

The Barnaby river flows into the southwest Miramichi river from the south opposite Millerton and about eight miles above Newcastle.

Opposite the mouth is Barnaby island, inside which the channel from Barnaby river flows for a length of about one mile to join the main stream. Above the island are extensive storage grounds for rafts which are reached by the inside channel through which also scow loads of deals are taken from a mill situated at the river mouth.

On October 3, 1913, a contract was entered into with Mr. Peter England, for the dredging of this channel, which was in progress between September 30 and November 13, 1914, with the dredge *Peter England*.

A cut 1,270 feet long and 45 feet wide to a depth of 3 to 5 feet at low water ordinary spring tides was made across the lower and worst shoal.

The material removed which was mud, stiff clay and gravel amounted to 3,555·6 cubic yards place or 5,055·3 cubic yards barge measurement. Expansion factor, 42 per cent.

The contract price was 60 cents a yard and the expenditure $2,237.24, of which $103.88 was for inspection.

BATHURST.

Bathurst, the shire town of Gloucester county, is situated on the south shore of the Bais des Chaleurs.

Bathurst harbour is about two and one-half miles long by two miles wide and is shallow and largely dry at low water except in narrow winding channels. A wide shoal outside the entrance also seriously interferes with navigation.

*Dredging.*

On 7th July, 1913, a contract was entered into with the Northern Dredging and Construction Co., Ltd., for dredging in the main or Nepisiquit channel of Bathurst harbour in order to allow vessels, which previously have been obliged to lie outside, to come to the wharfs for loads of lumber and also for the benefit of shipping in connection with a large pulp mill under construction, a proposed iron ore shipping dock, etc.

The width of the cut is generally 200 feet increased to about 300 at the curves and the depth called for under the contract 17 feet at low water ordinary spring tides. The final depth under the general scheme of improvement is 25 feet.

Spring tides rise 7 feet, neaps 2·5.

The original contract was for 400,000 cubic yards place measurement at 25 cents per cubic yard of which 190,620 cubic yards remained to be dredged at the beginning of 1914-15.

On 19th May, 1914, a second contract was entered into with the Northern Dredging and Construction Co., Ltd., for the removal of 600,000 cubic yards place measurement at 30 cents per cubic yard. The first contract was completed on August 22, 1914, and the second was begun on the same date.

Of the quantity under the second contract, 199,828 cubic yards were removed during 1914-15. The quantity remaining to be removed after the end of the season's work to complete the 17-foot depth inside the harbour is 641,420 cubic yards, place measurement, with, in addition, 162,000 cubic yards, place measurement, for a turning basin at the upper end of the main channel and about 200,000 cubic yards in the branch channel leading to the Middle river and the Public and Bathurst Lumber Company's wharfs.

The dredging in 1913, covered about three-quarters of a mile of channel immediately inside the entrance and taking in the Ripple and Ballast bars.

The next section, about 1,700 feet long, where the channel is already fairly deep has not been dredged, the work during 1914 covering the Seal bar up to the Forks for a length of 4,400 feet, 200 feet wide, and above the Forks for a length of 1,900 feet, 50 to 100 feet wide. A small area 400 by 50 feet was also dredged on the Nepisiquit shoal about one mile above the Forks.

There remains in the channel a length of about two miles where dredging has not yet been undertaken or is incomplete, in addition to about 900 by 450 feet at the turning basin.

On the branch channel to the Public wharf, a small amount of work was done at the Tetagouche bar by the Government dredge in a length of about 800 feet. A total length of about one mile of channel here requires improvement.

The following dredges were at work under the contract: *Invader,* from 21st May to 25th November; *Hayward,* from 29th May to 28th November; *Gray Loggie,* from 14th July to 3rd November; and *Steven D.,* from 29th October to 19th November.

The Government dredge *No. 3* worked inside at different times during the season when weather prevented dredging on the outer bar, between 19th May and 17th November.

The total quantities removed under the contracts were 390,448 cubic yards place or 398,888 cubic yards barge measurement. By the Government dredge, 15,339 cubic yards barge measurement.

The material is clay, mud, sand and gravel.

Dredging on the shoal outside the harbour entrance was continued between 18th June and 12th November by the Government dredge *No. 3,* except on 20th July to 14th August, 24th October and 2nd to 7th November, when it was at work on the Tetagouche bar and on Miramichi bay.

The outer shoal is about one and one-half miles wide and has been partially dredged throughout. During the past season, dredge *No. 3* worked on the inner 4,000 feet, the cut made being generally 100 feet wide, the quantity removed being 72,068 cubic yards barge measurement.

A strip about 3,000 feet long by 100 wide is still untouched and about one and one-quarter miles of the remainder of the cut is about 2 to 4 feet shoal.

The cost of the work in 1914-15, has been $116,543.29.

### BAY DU VIN.

Bay du Vin lies on the south side of the inner Miramichi bay 20 miles east of Chatham.

A public wharf was constructed here by the Provincial Government in 1891-94, and in 1899-1901 was partly repaired and partly rebuilt by the Department of Public Works.

A section of the original work was damaged or destroyed by ice during a storm in December, 1913. This was rebuilt during 1914-15, with a solid cribwork 404 feet long replacing the old structure of small blocks and spans and connected with the old work at the outer end by a span of 14 feet. The cribwork is 20 feet wide on top with a batter of 1 in 2 on the exposed side and 1 in 8 on the inside and is filled with ballast and surfaced with gravel. It is sheathed on each side with 4-inch plank.

The plank covering of the old approach 75 feet long was removed and the gravel surfacing extended over this section.

A wire fence 481 feet long was erected on each side of the wharf.

Early in the season, also, the sound timbers from the damaged blocks were collected and piled on the shore to save loss and a temporary walk was laid on trestles along the

side of the work so that the outer end of the wharf could be used by steamer passengers, etc., during the reconstruction.

Work was in progress between the 16th and 25th April, between the 25th May and 1st June, on a few scattered days in June and between the 2nd July and 8th November.

The expenditure for the fiscal year was $6,104.03.

### BEAVER HARBOUR.

Beaver Harbour, Charlotte county, situated 35 miles west of St. John in a direct line, and 7 miles from Pennfield station, on the New Brunswick Southern railway, is used by coasting vessels as a temporary anchorage, is also a fishing station. On the site of a former Provincial Government wharf, the department constructed a pile wharf in 1909. The work consists of an approach 320 feet long and 25 feet wide, and a pier-head 40 by 60 feet, with a depth of 24 feet on the face, at high water.

During 1914-15, the covering of the wharf was repaired with 2,400 feet b.m. of new plank, work was carried on during February, 1915.

Expenditure for fiscal year 1914-15, was $84.80.

### BLACK RIVER.

The Black river is a small stream entering Buctouche harbour about one mile north of Buctouche.

During March, 1912, and February and March, 1913, a narrow cut generally 10 to 20 feet wide was dredged by day labour across a shoal at the river mouth extending up to a small wharf constructed at a highway bridge.

The dredging is intended to give the fishing boats access to the wharf at all times of tide.

During the summer of 1913, the dredging was continued under an agreement with Mr. Felix Michaud in a channel about 1,200 feet long and generally 40 feet wide.

This work was completed in 1914, between 27th May and 16th June, when 1,996·8 cubic yards barge measurement of mud, clay, sand and shells were removed giving the required depth of about 4 feet at low water ordinary spring tides in the cut 1,200 by 40 feet which was widened about 25 feet in a length of 100 at the upper end for berths at the wharf.

The price was 36 cents per cubic yard barge measurement and the expenditure for 1914-15, $764.60, including $45.75 for inspection.

Above the bridge is a shoal about 800 feet long where a small amount of dredging was done some years ago. About 8,400 cubic yards barge measurement remain to be removed here.

### BRUNDAGE'S POINT.

A high water wharf was constructed at this place by day labour, work commencing on June 20, 1913 and being completed on October 14, 1914.

The approach is 144 feet long by 17 wide, built of a stone fill and gravel surface, while the head block is of cribwork 81 feet long with two faces 41 feet each and with 10 feet of water at high water level.

The wharf was constructed at a total expenditure of $4,394.08, the expenditure for the fiscal year ending March 31, 1915, amounting to $1,395.98.

### BUCTOUCHE BEACH.

Buctouche beach, 6 to 7 miles long, separates Buctouche harbour from the Northumberland strait. The harbour entrance is at the southern end of the beach. At

the northern end it is proposed to cut a channel through the beach to give a short passage from the harbour to the fishing grounds and to provide a shelter for boats on the outer shore. Breakwaters and breast works have been constructed on each side of the proposed canal which will be about 950 feet long at high water level and about 40 feet wide.

During the fiscal year 1914-15, the southern breakwater was extended 50 feet with pilework 10 feet wide of similar construction to the original work. The stone was removed from the north breakwater in a length of 66 feet, the breakwater refilled with brush and the stone replaced. The sheet piling of the inner face of the north breakwater and breastwork with 3-inch plank was continued for a length of 598 feet and the breastwork was extended 40 feet at the inner end. A light stake and brush breastwork 145 feet long and 3 feet high was built parallel to the north breastwork to hold the sand. The south breastwork was filled behind with seaweed, brush and stone in a length of 360 feet, and the north breastwork for a length of 320 feet.

The work was in progress between the 4th June and 19th September.

The expenditure for the fiscal year was $2,501.58.

*Dredging.*

The dredging at Buctouche beach is intended to open up a proposed canal between breakwaters and breastworks already constructed in order to provide a harbour of refuge for fishing boats and a short passage to the fishing grounds from the upper end of Buctouche Harbour.

It covers a total length of 2,800 feet of which 1,200 is in the canal proper and 1,600 across the shoal in Buctouche bay as the upper end of Buctouche harbour is called.

Dredging was begun in 1911, and in 1913, the canal was cut through and again partly filled with sand by a storm.

In 1914, dredging was in progress under agreement with Mr. Felix Michaud with the dredge *Excavator* between 14th July and 3rd November. It covered the whole length of the cut in the bay and the inner 600 feet of the canal, the width being 40 to 50 feet and depth 3½ to 4½ feet at low water ordinary spring tides.

The total quantity removed in 1914-15, was 13,182½ cubic yards barge measurement of mud and sand of which 1,156 cubic yards were first cast-over, and the cost at 36 cents per cubic yard was $5,280.01 including $256.88 for inspection.

To complete the cut in the canal, particularly in the outer 600 feet, there remains to be removed about 15,000 cubic yards, barge measurement. The quantity is however indefinite on account of the likelihood of sand drifting into the cut until the current through it is well established.

BUCTOUCHE HARBOUR.

*Dredging.*

In the 5½ miles between the town of Buctouche and the harbour entrance on the Northumberland strait, three shoals occur, the most serious of which is at the entrance where a wide ledge of rock limits the depth to about 11 feet at low water ordinary spring tides.

In 1913, the Government rock breaker *Lobnitz No. 3* began work on this ledge breaking the rock to a depth of 3 to 4 feet for a length of 360 and width of 122 feet.

In 1914, the rock breaker continued work between 15th June and 24th October and covered an area 725 feet long by 122 wide. There remains a length of 600 feet of ledge still to be broken.

Between 20th August and 16th October, the Government dredge *No. 13* worked over the inner section of the shoal removing the sand and broken stone in a length of

600 feet, about 100 feet wide, and a further length of 440 feet 50 feet wide, the depth reached being 15 to 16 feet at low water ordinary spring tides.

The material removed amounted to 10,322 cubic yards barge or 10,233 cubic yards place measurement.

The outer shoal has a total length of 4,900 feet, the material of which is sand except where dredging is now in progress. In the harbour channel are two shoals of mud and clay 4,180 feet and 1,750 feet long between the 13-foot contours.

CAMPBELLTON.

Campbellton, Restigouche county, is situated on the southern shore of the Restigouche river 16 miles above Dalhonsie and 6 miles below the head of the tide. It is a divisional point on the Intercolonial railway and the terminus of the International railway. It is an important deal shipping port.

During the fiscal year 1914-15, the old plank covering was replaced with a stone and gravel surfacing for a length of 165 feet and width of from 10 to 15 feet on the western extension of the deep water wharf, and the 4 inch plank over a portion 10 by 15 feet on the western extension and 10 by 16 feet on the deep water wharf was renewed. The cap of the deep water wharf for a length of 3,000 feet and the pile driver were painted with two or three coats of carbolineum; five new fenders and 20 lineal feet of 10 by 12 cap were placed on the deep water wharf; the tool-shed was repaired and shingled, and small holes in the gravel covering were filled.

On the Market wharf, the cap timbers in a total length of about 800 feet were painted with three coats of carbolineum.

Work was in progress between the 15th August and 20th October.

The expenditure for the fiscal year 1914-15 was $795.94.

*Dredging.*

DEEP WATER WHARFS.

The Restigouche is a rapid river down to the tidal limits, 6 miles above Campbellton, and the deposit of mud and silt in the river about Campbellton, where the river current is checked by the tide, is very heavy; in consequence, dredging is required each year to maintain the depth at the wharfs and in the river channel.

At the deep water wharfs, where berths with 22 feet at low water ordinary spring tides are required to enable lumber steamers to lie afloat and take full loads, the departmental dredge *St. Lawrence* or *No. 2* was at work between 25th June and 25th July and between 29th August and 16th September, in deepening the berths along the outside face for a width of about 100 feet and length of about 1,100 feet. The depth obtained was about 20½ to 23 feet against 18 to 20 previous to dredging, also along the inner face near the lower end for a length of about 300 feet 100 wide giving a depth of about 22 to 23 feet against about 20 previously.

The material removed amounted to 22,400 cubic yards, barge measurement.

TOWN AND SHIVES WHARFS.

Between September 17 and October 6, the Government dredge *St. Lawrence* or *No. 2* was at work on the river front of the town of Campbellton dredging an approach to the Town wharf, the approach being also of service for the Shives wharf which lies immediately above. Imports of coal, molasses, etc., are made over these wharfs.

The area dredged was about 320 by 125 feet, starting about 300 feet from and running in towards the lower corner of the Town wharf. The depth reached was 12 to 15 feet at low water ordinary spring tides.

The material removed, consisting of mud and gravel, etc., was 8,400 cubic yards, barge measurement.

CAPE BALD.

Cape Bald, Westmorland county, is a farming and fishing district on the south shore of the Northumberland strait, about 14 miles east of Shediac.

The construction of a breakwater at Cape Bald was begun on June 6, 1909, under contract with Mr. E. A. Wallberg, and the work, which consists of an approach 646 feet long and a pier-head 100·4 feet long on the outer face, was practically completed at the end of 1910.

After the forms were removed, a number of holes and imperfections appeared in the concrete faces of the breakwater and the scouring of the bottom by waves left vacancies under it.

During the fiscal year 1914-15, a protective work of reinforced concrete caissons was placed along the north side of the breakwater to within 55 feet of the northwest corner. Twenty-one caissons, 4 feet wide on top, 5½ feet on the bottom, 11 feet long and 6 feet high, were built, of which 17 were placed on foundations levelled off by a diver. 465 bags of cement and about 225 cubic yards of broken stone were used. The caissons and a space 2½ to 4 feet wide between them and the old wall were filled with ballast, and the interior of the breakwater in a space of about 60 by 10 by 12 feet deep, where the ballast had been washed out, was refilled.

An office and storehouse 25 by 18 feet was built.

Work was in progress between the 3rd June and the 4th September.

The expenditure for the fiscal year was $3,593.84.

CHOCKFISH.

Chockfish, Kent county, is a farming and fishing settlement on the Northumberland strait, about midway between Richibucto and Buctouche.

The works consists of breakwaters at each side of the present river mouth and breastworks and a dam to close the original winding and unstable channel. Through their construction, the depth of water has increased and a permanent entrance has been provided to a safe and convenient harbour.

Between June 15 and July 31, and between August 17 and September 25, the large stone was removed, the breakwaters were filled with brush and the stone replaced for a length of 310 feet of the north breakwater and a length of 250 feet of the south breakwater. On the north breakwater, a sharp corner, which projected into the channel and affected the current and caused an accumulation of sand, was removed and the breakwater reconstructed with piles, walings and cross-ties filled with brush and stone for a length of 37 feet. The square timber and tops of the piles of the breakwater were painted with carbolineum.

The expenditure for the fiscal year was $912.32.

CHOCOLATE COVE.

Chocolate Cove, Charlotte county, situated at the southeast of Deer island, is distant 2 miles from Leonardville and 2½ miles from Cummings cove, where there are departmental wharfs. The population, about 125, are all dependent upon fishing.

A contract was let on December 15, 1913, for the dredging of a basin, approximately 400 by 150 feet, to a depth of 9 feet below water, and the construction of a wharf extension, consisting of a pile approach 310 feet long, together with a cribwork pier-head, 40 by 60 feet. Dredging was carried on between April 20 and May 29, 1914; and the work on the wharf was begun on June 13, and completed on November 7, 1914.

Expenditure for fiscal year 1914-15, was $26,646.87.

On April 23, 1915, the Provincial Government of New Brunswick transferred, free of charge, the old wharf and right of way. The wharf is about 142 feet long along the centre line, 29½ feet wide at the public road approach, widens to 39 feet in a distance of 35, then narrows to 22 feet for 103 feet to the face.

COCAGNE.

*New Wharf at Cocagne Church.*

Cocagne, Kent county, is a fishing and farming village and settlement on the Northumberland strait, about midway between Buctouche and Shediac.

On May 11, 1914, a contract was entered into with Mr. H. G. Beresford for the construction of a wharf at Cocagne Church, which is about one mile north of the village proper and a point convenient to the fishing grounds and used as a landing place by a large number of boats.

Work began on February 8, 1915, and the contract was completed on March 25.

The wharf is 380 feet long and consists of an approach or shore block 159 feet long and about 15 feet wide, 5 spans 18½ to 19 feet long and 15 feet wide, 4 blocks 20 to 21½ feet long and 15 feet wide and a pier-head 40 by 40·5 feet. The small blocks and pier-head are sheathed with 4-inch creosoted plank.

The contract price was $6,880 and $262.28 was paid for 3,593 cubic feet of extra cribwork at 7·3 cents per cubic foot, being pro rata of the contract price, required in addition to that shown on the contract plan on account of greater settlement and changes in the bottom.

The expenditure for the fiscal year, including $105 for inspection, was $7,247.28, which is the total to date on this wharf.

COLE'S ISLAND.

Cole's Island is situated at the head of Washademoak river, and is the beginning of navigation on that river.

Dredging was for the purpose of excavating a basin in front of the wharf to a depth of 9 feet below low water.

The area dredged over was approximately 10,500 square feet. The material removed consisted of hardpan and boulders in addition to the wreckage of two burned steamers. 2,380·4 cubic yards, scow measurement, were removed.

The contract rate of payment was 22½ cents per yard, scow measurement, making a total cost of $758.14 (removal of wreckage after 23½ hours' work at $9.47 per hour being included).

This work was performed by the dredge *Tantawanta* of the St. John River Dredging and Construction Company. Dredging was commenced on September 3 and completed on the 18th.

DALHOUSIE.

Dalhousie, Restigouche county, lies at the head of the Baie des Chaleurs and at the mouth of the Restigouche river, 16 miles below Campbellton. It has a population of 1,650 and is an important lumber shipping port.

The ferry wharf, constructed by the Provincial Government in 1892, for the accommodation of the interprovincial ferry as well as for general local shipping, was rebuilt by the Department of Public Works in 1907 and 1908.

Repairs were made between 10th July and 1st August, 1914, when a strip of 2-inch plank was laid over the old covering of the approach for a length of 478·6 feet, 399 feet being 13½ feet wide and the remainder, 79½ feet, being 18·7 feet wide, and the whole of the pier-head, 68½ by 39½ feet was also re-covered.

A part of the centre of the pier-head was raised where it had settled by placing extra timbers over old stringers.

The expenditure for the fiscal year was $481.96.

*Dredging.*

In August, 1913, a contract was awarded to the Northern Dredging and Construction Co., for the removal of a ledge or reef near the outer end of the berth at the Dalhousie Lumber Company's wharf on the western side of the Dalhousie ferry basin. The dredging is intended to provide a safe berth for steamers loading lumber and pulpwood at this wharf.

The prices under the contract were $5 per cubic yard place measurement for rock and 30 cents for soft material.

Dredging was in progress in 1913, and between 24th June and 7th July, 1914, when the greater part of the soft material was removed over the whole area, 200 by 75 feet, and the rock was drilled, blasted and removed to a depth of about 21 feet over about 108 by 65 feet. The worst section was dredged and a considerable improvement made but the contract was not completed.

During 1914, 88·8 cubic yards of mud or class "B" material and 319·8 cubic yards of rock blasted in the previous year, were dredged.

In the summer of 1914, also under agreement with the Northern Dredging and Construction Co., 2,974·8 cubic yards, barge measurement, were removed in widening the turn into the ferry wharf and new breakwater in the ferry basin, and in removing shoal spots in the eastern area of the ferry basin generally, uncompleted in the dredging of the previous year. The price was 29½ cents per cubic yard, barge measurement.

The expenditure including $58.25 for inspection was $2,561.47.

DINGEE'S SHOALS.

Dingee's shoals are situated in the Gagetown Creek channel of the St. John river, 36 miles from Fredericton and 48 miles from St. John.

Dredging was for the purpose of providing a channel 150 feet wide and 700 feet long to a depth of 11 feet below low water through these shoals.

The area dredged amounted to 147,000 square feet. The material removed consisted of mud and sand. The quantity removed, place measurement, amounted to 16,983·3 yards, the quantity below grade being 4,713 cubic yards.

Departmental dredge *No. 12* performed this dredging work on July 8, suspending on August 4.

DORCHESTER.

Dorchester, Westmorland county, is the shire town of Westmorland county and a station on the Intercolonial railway, 27 miles southeast of Moncton.

In 1909, this department constructed a wharf 202 by 52 feet on the Memrocook river at Dorchester.

Th old railway wharf adjoining, with a frontage of 200 feet, was taken over from the Department of Railways and Canals in 1911.

The latter work was much out of repair and on October 29, 1913, a contract was entered into with the Island Dredging and Construction Company for its reconstruction and enlargement. The contract price is $15,400.

Work began on September 19, 1914, and by November 30, when it closed down for the season, the cribwork, 10 feet wide and 6 feet high, to form the outer face of the vessel bed in front of the wharf, had been built for the full length of 246 feet. The excavation to level off the interior of the bed was partly completed and the foundation of the new face of the wharf was laid for a length of 120 feet, one to eight tiers high, and 15 feet wide.

Between April 9 and 20, on May 1, 4, 29 and 30, and between June 13 and 23, work was in progress by day labour in removing the accumulation of mud from the vessel bed in front of the departmental wharf. The excavation covered an area about 200 feet by 14 feet and about 1½ feet deep.

The expenditure for the fiscal year 1914-15, was $2,957.50, including $199.25 for inspection and $238.75 for the day-labour work.

DOUGLAS HARBOUR.

Douglas harbour is situated on the western shore of Grand lake, about 6 miles from its entrance. It is an extremely well-protected harbour and can thus be used in all weather throughout the entire season of navigation.

Dredging is for the purpose of excavating a basin which, when completed, will be 340 feet long by 272 feet wide, containing an area of 92,500 square feet.

Work has been partially completed to a depth of 8 feet below low water. There remain uncompleted 2½ cuts of a dredge width of 25 feet per cut, on the eastern side of this work. Nature of the material removed was silt and sand; 5,025 yards, place measurement, were removed (71 yards being outside ranges), the equivalent scow masurement being 5,576·4 yards. The expansion factor from place to scow measurement was 11 per cent.

The contract rate of payment was 35 cents, the contractors being entitled to receive payment for the removal of 4,954 yards, which amounts to $1,733.90.

Dredging was performed by the *Tantawanta* of the St. John River Dredging and Construction Company. Work was commenced on November 9 and suspended on November 18, on close of navigation.

DUNHAM'S.

Dunham's is situated on the eastern side of the St. John river, about 25 miles from St. John.

Dredging was for the purpose of providing a channel to and berth in front of the wharf with a depth of 9 feet at low water.

Dredging was commenced here on October 4, 1913, by the New Brunswick Construction Company, and after the removal of 12,683·2 yards, place measurement, was suspended on October 22. The total cost for 1913, including inspector's pay, amounted to $3,604.70.

The material removed consisted of clay and gravel. The total place measurement removed during the whole work was 17,381·8 yards, the scow measurement being 20,530·7 yards. The expansion factor from place to scow was 18 per cent.

The contract rate was 28 cents, the contractors being entitled to receive payment for the removal of 686 yards, during 1914, amounting to $192.08. The total pay due contractors for whole work is $3,743.38 (over-depth of 4,012·6 yards having been deducted).

Dredging was commenced in 1914 on July 24 and completed on 29th of same month.

DURHAM.

The public wharf at Durham, Restigouche county, was constructed in 1905-06. It lies on the Baie des Chaleurs near the eastern end of Restigouche county.

The wharf has nearly every year been largely covered with seaweed, drift logs, etc., carried on to it at high tides. During the fiscal year 1914-15, a quantity of 10 by 12 and 10 by 10 timber has been obtained and laid in two tiers over the original cap to raise the sides of the wharf.

Work was in progress between March 15 and 31.

The expenditure for the fiscal year was $1,706.57.

DYKEMAN'S SHOALS.

These shoals are situated in the St. John river 51 miles from Fredericton and 33 miles from St. John. They are located at the upper end of Spoon island and extend down the eastern channel past Spoon island towards Gerow's wharf, a distance of approximately 1,200 feet beyond the upper end of Spoon island.

Dredging was for the purpose of affording a channel 150 feet wide from deep water to deep water through these shoals.

A channel 1,700 feet long and 150 feet wide has been dredged to 11 feet below low water. There remains to be removed a quantity amounting to 39,989 yards, place measurement, to complete the work.

The material removed consisted of sand and mud.

Departmental dredge *No. 12* commenced work on October 9. After the removal of 25,931 yards, place measurement, work was stopped on November 14.

### EDGETT'S LANDING.

Edgett's Landing, Albert county, is on the west side of the Petitcodiac, 2 miles below the village of Hillsborough on the Albert Southern railway. The wharf is of round and square cribwork, 400 feet long, from 20 to 40 feet wide, and 35 feet high at the outer end. Spring tides rise 46 feet.

During 1914-15, the top of the wharf, consisting of covering, stringers and one tier of timber, was renewed for a length of 220 feet and a width of 20 feet; 450 lineal feet of new cap, two new mooring posts and a number of fenders were placed on the wharf; the bed for vessels beside the wharf was repaired, and a freight shed, 12 by 20 feet, was erected and painted.

Work was carried on during July, August, October and December, 1914, and January, 1915.

Expenditure for fiscal year, 1914-15, was $1,356.79.

### EVANDALE.

A high water wharf was constructed at this place by contractor John O. VanWart, work having begun on August 7, 1913. The wharf was completed on May 31, 1914, at an expenditure of $8,000.

The wharf is 346 feet long including an approach 122 by 24·1 feet wide, and the face is 57 feet wide and 14 feet at high water level.

The total expenditure, including inspection, for the fiscal year ending March 31, 1915, amounted to $4,371.33.

### FAIRHAVEN.

Fairhaven, Deer island, Charlotte county, is 7 miles from St. Andrews, and is a sheltered fishing settlement and a port of landing for the mails. Some years ago, the Provincial Government built a wharf 190 feet long, of trestlework. On April 23, 1915, the wharf and right of way were transferred to the Federal Government free of charge.

On November 28, 1912, a contract was let for the construction of a pierhead of round cribwork 32 feet by 50 feet, measured on the top, to be connected with the present wharf by an 8-foot span. During the fiscal year 1913-14, the pierhead with a base 58 by 40 feet was built to a height of 16 feet, sunk in place, and 8 feet of ballast placed throughout the work.

During 1914-15, the pierhead was completed, and a floating slip, begun last fiscal year, was built at the wharf, as an extra to the contract. The slip consists of a scow, 17 by 30 feet, and a bridge-span, 45 feet long and 6 feet wide.

Work was resumed April 2, and completed July 20, 1914.

Expenditure for fiscal year 1914-15, was $4,569.

FREDERICTON.

*Dredging.*

Fredericton is the capital of the province and is situated on the western bank of the St. John river, 84 miles from St. John. It is the terminal stopping place for all steamers running to St. John, Gagetown and intermediate points.

Dredging was for the purpose of removing all material to a depth of 11 feet below low water along the waterfront between the highway and railway bridges. This provides a deep water basin for a distance of 500 feet from face of the wharf.

Dredging was commenced by the New Brunswick Construction Company in 1912, the removal for that year being 173,656·3 yards, scow measurement. Dredging was continued in 1913, the removal being 51,446 yards, scow measurement. The total pay and expenses of inspectors for the two years was $2,733.88.

Dredging was recommenced in 1914, the material removed being gravel and sand. The total quantity removed during the three years was 253,074 yards, scow measurement, the removal for 1914 being 27,971·7 yards.

The rate of payment was 23 cents per cubic yard, scow measurement, the total amount due contractors being $58,207.02. The total expenditure for 1914 amounted to $6,433.49.

The New Brunswick Construction Company performed this work, the dredges employed during 1914 being *New Brunswick No. 1* and *Tantawanta.*

Dredging was commenced in 1914 on July 31 and completed on August 22.

The total expenditure for the whole work, including inspectors' pay, amounted to $61,195.90.

*Wharf.*

On August 26, 1912, contractors Chas. and Robert Forbes commenced work on the construction of a concrete and cribwork high water wharf at Fredericton, York county.

Work was completed on June 10, 1914, at a total expenditure of $19,700, with extras to the amount of $427.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $2,852.33.

GOOSEBERRY COVE.

Gooseberry cove, St. John county, is situated 23 miles by road, and 14 by water, west of St. John. Twelve fishing boats are owned here, and many fishermen make this place their headquarters during the salmon fishing season.

In 1911-12, the department began the construction of a wharf of round cribwork, which, in 1913-14, was brought up to the finished height, 4 feet above high water, and ballasted. The wharf consists of an approach 130 feet long and 15 feet wide, and a pier-head, 25 by 46 feet.

During 1914-15, the work was completed by the addition of stringers, covering and cap and single fenders on the inside.

Work was begun October 1 and completed November 18, 1914.

Expenditure for fiscal year 1914-15, was $764.43.

GRAND ANSE.

Grand Anse, Gloucester county a station on the Caraquet railway and a fishing and farming settlement of about 800 inhabitants, is situated on the southern shore of the Baie des Chaleurs, 28 miles northeast of Bathurst. The construction of a breakwater for the protection of the fishing boats was begun in 1876.

Between August 20 and September 15, 1914, 349 lineal feet of cap timber was laid and the covering in a length of 142 feet on a groyne begun in 1911 on the easterly side of the harbour. One hundred cubic yards of ballast were placed in the work and the cap timbers and tops of the fenders were painted with carbolineum, 22 fenders were placed. At the shore end of the groyne, an extension 22 feet long of rough cribwork filled with brush, drift logs, etc., was built to fill a hollow scoured out in the beach.

On November 20, the pierhead of the breakwater was badly damaged by a heavy storm which was accompanied by an extremely high tide. Between November 25 and December 3 a small section of the covering which was partly torn up was relaid, 7 cubic yards of ballast being first placed in the work. Two timbers, knees and 1 stringer were replaced.

From the wreckage carried ashore from the breakwater, 20 knees, 50 pieces of lumber and two barrels of bolts, spikes, etc., were saved. The scow was placed in safety for the winter.

The expenditure for the fiscal year was $274.74.

## GRANDIGUE.

Grandigue, Kent county, is a fishing and farming settlement on the northerly side of Shediac harbour and about 7 miles distant by road from Shediac.

Between October 6 and November 13, 1914, dredging was in progress by day labour in the berths and approach to the Grandigue public wharf where 2,853 cubic yards, barge measurement of sand, mud, clay and stones were removed at a total cost of $1,047.94, or 36·7 cents per cubic yard.

A small orange peel dredge was hired for $15 per day including wages of engineer, gasoline, oil, etc., and the berths were gone over afterwards with oyster rakes to remove lumps.

An area was dredged 250 feet long and 40 wide; thence in 100 feet widening to 150 feet at the wharf, and continuing on each side of the wharf in berths 100 to 120 feet long and 40 to 50 wide. The depth of dredging varied from 2 to 2½ feet at the outer end of the approach where it reached 7 feet at low water to about ½ foot or 4 feet at low water ordinary spring tides at the inner end of the berths.

The increased depth will allow fishing boats, for which the wharf was constructed, to approach and leave it at practically all times of tide.

The expenditure for the fiscal year was $1,047.94.

## GREAT SALMON RIVER.

Great Salmon river, St. John county, is a small tidal inlet 8 miles east of Quaco, and 43 miles east of St. John. Shipments of lumber are made from this place. Spring tides rise 30 feet. A small harbour, dry at low water, is formed by the projection of a beach from the west side, a narrow opening remaining for an entrance. To keep open this entrance, piers, 372 and 316 feet long, respectively, have been built on both sides, by the department.

During 1914-15, a freshet carried away the beach along the creek side of the western breakwater, laying bare the base of the work for a distance of 220 feet. This damage was repaired by filling in brush and ballast for that distance on an average height of 5 feet.

Work was carried on during March, 1915.

Expenditure for fiscal year 1914-15, was $147.75.

GRIMROSS CANAL.

Grimross canal is situated 35 miles from Fredericton and 48 miles from St. John at the extreme head of Gagetown creek in the St. John river. It is located on the route of steamers plying between St. John and Fredericton.

Dredging has been performed to a depth of 11 feet below low water. A channel approximatively 2,000 feet long and 150 feet wide, was to have been dredged at this place but at present the work is uncompleted. The layout of this work before dredging showed a deep water channel down the centre with dredging required on each side of this channel so as to give a total width of channel of 150 feet. Of this work, the cut on the western or mainland side of the channel has been dredged to 9·5 feet by the departmental dredge *No. 12*, while the eastern or island side of the channel has been dredged to 11 feet below low water except for a small portion.

Work was commenced here on August 8 by departmental dredge *No. 12*, but on account of difficult dredging being met with owing to the stiff nature of the clay, this dredge was withdrawn on October 6, after the removal of 14,491 yards, and the work was continued by contract.

Nature of the material was clay and mud.

The total quantity removed by the New Brunswick Construction Company amounted to 16,717·5 yards, place measurement, the scow measurement being 20,067 yards. The expansion factor from place to scow measurement was 19 per cent.

The contract rate of payment was 21½ cents, the contractors being entitled to receive payment for the removal of 15,631·7 yards, place measurement, which is the total yardage less overdepth and outside ranges. Amount due contractors the New Brunswick Construction Company is $3,360.75.

Dredging was performed by the *New Brunswick No. 1,* which began October 27 and completed November 15 and the *Tantawanta* which began November 2 and completed November 5.

HARVEY BANK.

Harvey bank, Albert county, is situated on the Shepody river, a tidal reach of the estuary of the Peticodiac. The Shepody is navigable to Albert. Approximately three million feet of lumber per year have been shipped from Harvey bank during the past two seasons, beside a small amount of farm produce, etc. The departmental wharf built in 1909, is 125 feet long and 44 feet wide, including a pierhead, 65 by 25 feet. There is a depth of 20 feet at high water at the pierhead. This wharf was not made sufficiently high to stand above extreme spring tides and it was found necessary to add to its height.

During 1914-15, the wharf, having an area of 4,800 square feet, was raised 2 feet by the addition of two tiers of timber, stringers, covering, cap and fenders. A section of an old wharf, adjoining the new wharf, which had been purchased by the department was also improved by raising the frontage for a length of 100 feet and a depth of 16 feet by 4½ feet, with five tiers of timber, stringers and covering. The roadway to the wharf was also improved with brush and gravel.

Work was carried on during October, November and December, 1914, and March, 1915.

Expenditure for fiscal year 1914-15, was $2,073.46.

HATFIELD'S POINT.

On July 28, 1914, contractor Wm. R. Fawcett commenced work on the construction of a concrete and timber graded wharf at Hatfield's point, Kings county, work being completed on January 1, 1915, except for the concrete sidewalk.

The wharf is 169 feet long by 81½ feet wide at the outer face, while the inner or high water section is 82½ feet long by 45 wide, with a depth of 12½ feet of water at high water level.

The total expenditure for the fiscal year ending March 31, 1915, including inspection, amounted to $8,371.70.

HEUSTIS LANDING.

On July 13, 1914, work was commenced by contractor Melvin Jones on the graded wharf at Heustis landing, Queens county, and was completed on January 18, 1915.

The wharf is 169½ feet long, 33 feet wide at the shore end and 50½ at the face, and was constructed for $6,275, the amount of the contract, in addition to extras amounting to $125 for mooring posts, and $132.75 for extra settlement, a total expenditure of $6,522.37.

HUMPHREY'S.

Humphrey's is situated on the western shore of the Washademoak lake, about 8 miles from the St. John river, and is a point of call for the steamer of the St. John-Washademoak route.

Dredging was for the purpose of excavating a basin in front of the wharf so as to make the wharf easily accessible for the arrival and departure of boats.

The material removed was mud and gravel.

12,048.7 yards, scow measurement, were removed.

The contract rate of payment was 22½ cents, the total amount due contractors the St. John River Dredging and Construction Company being $2,710.96.

Dredging was performed by the *New Brunswick No. 1*, which began on August 26 and completed on September 1, and the *Tantawanta*, which began on September 21 and completed on October 27.

KOUCHIBOUGUAC.

Kouchibouguae harbour, Kent county, is entered by a narrow passage or gully between long sand beaches, which separate the wide expanse of the harbour from the Northumberland strait. The entrance is about twelve miles north of Richibucto and eighteen south of Miramichi bay.

Of late years, new gullies have opened up which, by reducing the current in the main entrance, tend to lessen the depth of water at the latter. The work of closing the new gullies and raising the low parts of the beach with breastworks to prevent further breaks began in 1908-09.

During the fiscal year 1914-15, between July 7 and August 29, a breastwork 800 feet long was constructed of piles 14 feet long, of which 200 were driven in two rows 6 feet apart, the piles being 8 feet apart in the row; three tiers of poles were spiked longitudinally to the piles and the interior was filled with brush weighted down with stone. The old breastworks were extended 65 feet and repaired by replacing the brush and stone washed out last autumn in a length of 300 feet. The second dam was raised 4 to 5 feet by adding brush and stone between the piles for a length of 270 feet. Three groynes, one 25 feet and two 30 feet long, were constructed of piles 15 feet long driven 11 feet into the sand, braced with 4 by 6 walings, and sheathed with 2-inch plank.

The expenditure for the fiscal year was $1,998.44.

LEONARDVILLE.

Leonardville is a fishing station on the eastern side of Deer island (part of the County of Charlotte), three miles from Lord's cove and two miles from Chocolate cove. The departmental wharf at Leonardville, built in 1910, is 303 feet in total

length, consisting of a trestle approach 143 feet long, a pile approach 120 feet long, and a cribwork pier-head, 60 by 40 feet.

During 1914-15, the floating slip, begun last fiscal year, was completed and some improvements and repairs were afterwards made to it. The slip consists of a scow, 17 by 30 feet, and a bridge-span, 45 feet long and 6 feet wide.

Work was carried on during the month of May, and on a few days in July and August, 1914.

Expenditure for fiscal year 1914-15, was $332.46.

### LITTLE ALDOUANE.

The Little Aldouane river enters the northwest arm of the Richibucto harbour about 2 miles north of Richibucto.

The dredging here is intended for the benefit of the fishing boats which bring their catches to the Little Aldouane public wharf.

Between November 6 and 11, 1914, 252·9 cubic yards, barge measurement, of mud were removed under agreement with Mr. George G. Daigle to complete the small amount of dredging which remained from the former work of April, 1912, and March, 1913.

At the public wharf, a total area of about 30 by 100 feet was gone over with depths of 3 to 4 feet at low water ordinary spring tides to complete the dredging of the berths, and in the cut across the flats at the river mouth an area 25 by 20 feet was dredged to the same depth, thus completing a straight course about 310 feet long by 40 wide to replace a sharp turn in the original river channel.

The price was 35 cents per cubic yard, barge measurement and the expenditure for the fiscal year was $100.12 including $11.60 for inspection.

### LITTLE BLACK RIVER.

The Little Black River, Northumberland county, is a branch of the main Black river which enters the south side of Miramichi bay about 16 miles east of Chatham.

Between September 15 and November 16, 1914, work was in progress on the construction of a wharf on the southerly side of the branch about ½ mile above its mouth and about 3 miles from the mouth of the main river. The wharf is intended for the shipment of hemlock bark, sawn lumber, etc., and for a landing place for scow-loads of mussel mud used as a fertilizer. It is 57 feet long on the outer face and 70·1 and 84·4 feet long on the upper and lower sides respectively. The faces are of cribwork 15 feet wide on the front and 8 feet at the sides and are sheathed all around with hardwood plank. The interior is filled and the top surfaced throughout with earth and gravel, of which about 500 cubic yards were used. A derrick, for use in handling mussel mud, etc., over the wharf, was purchased and fitted together towards the end of the fiscal year, but not set up.

In addition, a right of way to the wharf 75 feet wide and 75 and 52 feet long on the upper and lower sides respectively containing 0·11 acres more or less was acquired at a cost of $100.

The expenditure for the fiscal year and the total to date was $1,590.66, including the cost of the right of way.

#### *Dredging.*

A contract was entered into on July 21, 1913, with Mr. F. A. Fowlie for the dredging at Little Black river, which is intended to straighten and improve the channel and thus save expense and delay in towing rafts and scow-loads of lumber, mussel mud, etc. The contract price was 35 cents per cubic yard, barge measurement.

Work was in progress during 1913, and between July 2 and November 14, 1914, at different points between the lower bridge and the mouth, a distance of about one mile. The upper 600 feet was deepened in 1913 to 5 feet and a basin about 90 by 100 feet was dredged at the bridge. Below this section, a cut 800 feet long was made across the flats to avoid a crooked section of the channel and a second cut 1,300 feet long across the flats near the river mouth. The greater part of this was gone over in 1914, but the dredging was chiefly confined to the lower cut, which has a width of about 40 feet and depth of 4 to 5 feet at low water ordinary spring tides.

Under a separate agreement, at the same price, the points were taken off two sharp bends in the channel between the lower cut and the main Black river channel. The dredging here covered areas about 200 by 20 feet and 300 by 50 feet, and the material removed amounted to 4,939·8 cubic yards, barge measurement.

The amount removed under the contract was 31,805·61 cubic yards, barge measurement, of which 21,930 were dredged in 1913 and 9,875·6 in 1914.

In addition to the dates mentioned above, the contractor worked 18 days in January and February on the ice with a mud digger at the ends of lower cut, where the material was very hard and had been partly loosened by blasting in the autumn. In this way ridges were removed and the cut levelled, which was not possible with the plant used in the summer.

The material was mud and dry stiff clay.

A small amount of dredging is still required to improve the berth at the public wharf, at the bridge, dredging is also asked for to the extent of about 4,000 cubic yards, barge measurement, to improve the channel above the bridge.

The expenditure for the fiscal year, including $271 for inspection, was $5,456.51.

## LITTLE DIPPER HARBOUR.

Little Dipper Harbour, St. John county, is a fishing station 20 miles southwest of St. John, and 1½ miles distant, by water, from Chance Harbour.

On December 15 1913, a contract was let for the construction of a breakwater of round cribwork filled with baliast, 454 feet long and 24 feet wide on top, battered on both sides, sheathed on the outside and fendered on the inside. The work was begun on July 11, and was completed by September 26, 1914.

Expenditure for fiscal year 1914-15, was $8,765.79.

## LITTLE LAMEQUE.

Little Lameque, Gloucester county, is a fishing settlement on Shippigan island, about 4 miles northerly by road from Lameque. The value of the codfish and lobster fisheries is about $25,000 annually.

On April 30, 1912, a contract was entered into with Mr. H. G. Beresford, of St. John, N.B., for the construction of a wharf at Little Lameque.

During the fiscal year 1914-15, between May 22 and June 2, parts of the upper timbers were painted with carbolineum, the flooring near the outer end was spiked and the sheathing around the pier-head was trimmed.

The contract was completed on June 2. The wharf consists of a shore block 120·5 feet long and 20 feet wide; 28 blocks 25 by 20 feet; 29 spans 20 by 20 feet, and a pier-head 94 feet long and 29·9 feet wide composed of one block 25 feet and one 49 feet long and a span of 20 feet. The total length of the wharf is 1,496·1 feet.

The contract price was $24,890, from which $814.22 was deducted in the final estimate for cribwork shown on the plan and not built.

The expenditure for the fiscal year was $1,878.78, including $24 for inspection.

LOGGIEVILLE.

Loggieville, Northumberland county, is situated on the south side of the Miramichi river, 5 miles below Chatham.

During the fiscal year 1914-15, the plank covering of the slip in the Loggieville public wharf was renewed and holes and depressions in the interior were filled and levelled with stone and gravel at an expenditure of $28.95.

LORNEVILLE.

Lorneville, St. John county, is a fishing settlement on the north shore of the Bay of Fundy, 13 miles west of St. John. The work, a combined breakwater and wharf, consists of an approach of round cribwork, sheathed on the outside, 300 feet long and 24 feet wide on top, and a cribwork pier-head of irregular shape, with sides 142, 31, 87, 100 and 23 feet long respectively. The work is 54 feet high at the outer end, and there is a depth of 4 feet at low water at the face.

During 1914-15, the end of the old work was raised by an inclined platform 20 feet long, and steps were built, leading from the top of the wharf to low water, with four landing platforms. A derrick for hoisting supplies, etc., on the wharf was also constructed.

Work was begun July 22 and completed August 15, 1914.

Expenditure for fiscal year 1914-15, was $642.45.

LORD'S COVE.

Lord's Cove, a small fishing station on Deer island (part of the County of Charlotte), is a port of call for steamers plying between St. Stephen, St. Andrews, Eastport and other points in Passamaquoddy bay. The departmental wharf at Lord's Cove, begun 1900-01, and completed in 1903-4, is a pile and trestle work 328 feet long and 21 feet wide, with a pier-head, 50 by 40 feet, standing in 29 feet at high water. The stone approach is 28 feet in length.

During 1914-15, the angle in the wharf was filled in by the construction of pile-work, 19 by 30 feet. A new freight shed was built and painted, and a new flight of steps and landings were built in the wharf.

Work was begun August 3, and completed September 12, 1914.

Expenditure for fiscal year 1914-15, was $573.31.

M'ALLISTERS.

On July 29, 1914, repairs were made to the fenders and mooring post on the McAllister wharf, Queen's county.

This work was completed on August 31, the total expenditure for the fiscal year ending March 31, 1915, amounting to $18.

MCDONALD'S POINT.

McDonald's Point is situated at the lower end of Washademoak lake on its eastern shore and within two miles of the St. John river. It is a point of call for the steamer on the St. John-Washademoak route.

Dredging was performed for the purpose of excavating a basin in front of the wharf, making it easily accessible for the arrival and departure of boats.

The material removed was mud.

14,200·6 yards, scow measurement were removed.

The contract rate of payment was 28 cents per cubic yard, scow measurement, the total amount due the contractors, the New Brunswick Construction Company, being $3,976.17.

Work was performed by the *New Brunswick No. 1,* working from September 24 to October 15 and the *Tantawanta,* working from October 28 to October 31.

MAIN RIVER.

Main River settlement, Kent county, lies on the south side of the Richibucto river about 15 miles above its mouth and 9 miles above Rexton. The public wharf, built in 1900, is 150 feet long by 30 wide.

On October 16 and 17 and between October 28 and November 12, 1914, and between January 28 and February 5, 1915, the old decayed covering and upper timbers were renewed, two new face timbers were placed around the two blocks of the wharf, and the interior was filled and surfaced with about 270 cubic yards of stone and gravel averaging about 2 feet deep. Ten new stringers 10 by 12 by 30 feet and two 10 by 10 cap timbers were laid over the span which was covered with 3-inch plank in an area of 33 by 30 feet. Three new mooring posts were placed.

The expenditure for the fiscal year 1914-15 was $569.92.

MAQUAPIT LAKE.

Dredging for the purpose of excavating a dredge track 2,450 feet long, 75 feet wide to a depth of 7 feet below low water.

The area dredged amounted to 183,800 square feet.

The material removed consisted of mud and sand.

The quantity removed, including removal outside ranges and below subgrade was 29,709·2 yards, place measurement, the corresponding scow measurement being 45,894·0 yards. The expansion factor from place to scow measurement was 54 per cent.

The contract rate of payment was $0.20, the contractors, the New Brunswick Construction Company, being entitled to receive payment for the removal of 24,355·3 yards, place measurement, amounting to $4,871.08.

Work was performed by the *New Brunswick No. 1* and the *Tantawanta,* the *New Brunswick No. 1,* working from May 25 to June 26, and the *Tantawanta* from May 26 to June 23.

MARTIN'S HEAD.

Martin's Head, St. John county, is situated at the mouth of Quiddy river, on the north shore of the Bay of Fundy, 12 miles east of Great Salmon river. About four million feet of lumber and two thousand cords of pulpwood are shipped annually from this place.

During 1914-15, a breastwork was constructed for the protection of the Prejepscot Paper Company's wharf from easterly storms. All the lumber for the work was supplied free of charge by this company. The work consists of a timber groyne made of piling, sheathed for 150 feet and of pile bents, close-piled on the seaward side, for 275 feet.

Work was begun September 3 and suspended November 13,, 1914.

Expenditure for fiscal year 1914-15, was $1,684.56.

MILLERTON.

*Dredging.*

Between June 30 and July 3, 1914, the berth about 228 feet long in front of the Millerton Extract Company's wharf on the Southwest Miramichi river was dredged

by Mr. Peter England with the dredge *Peter England* when 297·1 cubic yards, place measurement of sand, etc., were removed.

The work was intended to do away with a bank along the face of the wharf to allow scows, tugs, etc., to lie close to the latter.

The dredge removed the soft material in the berth to depths of 3 to 5 feet at low water for an average width of about 25 feet.

The material measured in the barges amounted to 488·9 cubic yards.

The price under the agreement was 55 cents per cubic yard, place measurement, and the expenditure, including $9.50 for inspection, was $172.90.

The New Brunswick Pulp and Paper Company's wharf is situated on the north side of the Southwest Miramichi river near the lower end of Millerton and about 7 miles above Newcastle.

Dredging was asked to improve the berth along the outer face of the wharf for the benefit of tugs, barges, etc., and of a passenger steamer.

Under agreement with Mr. Peter England work was in progress on July 3 and 4, 1914, with the dredge *Peter England* when the berth was dredged in a cut about 93 feet long and zero to 30 feet wide to a depth of 3 to 5 feet at low water.

The material was sand overlying a hard bottom. The quantity removed was 131·1 cubic yards, place measurement, or 221·1 cubic yards, measured in the barges.

The expenditure was $76.11 including $4 for inspection.

### MILLS POINT.

Mills Point, Northumberland county, lies on the southern side of Miramichi bay, about 27 miles east of Chatham.

Repairs were in progress on the Mills Point wharf between July 3 and 28 and on August 27 and 28, 1914.

The work consisted of laying a strip of 3-inch plank longitudinally over the old covering in a length of 252½ feet and width of 9 feet on the inner end of the approach; and 2-inch plank in a strip about 50 by 19 feet over the pier-head. About 50 pieces of the original 3-inch covering that had broken through were renewed.

The expenditure for the fiscal year was $299.62.

### MIRAMICHI BAY.

#### *The Horseshoe and the Lump.*

The Horseshoe shoal lies at the entrance to the inner Miramichi bay and between Portage and Fox islands. The Lump lies in the outer bay about 2 miles inside the outer end of the ship channel. The distance between the two shoals is about 4 miles. These shoals were the worst obstacles to navigation for the shipping of the Miramichi river which in 1913-14 amounted to 477 vessels of 180,000 tons.

At the Horseshoe, dredging was in progress in 1910, 1911 and 1913 and at different times in earlier years, to give a channel 200 to 250 feet wide across the shoal, which is 4,500 feet long, with a depth of 22 feet at low water ordinary spring tides.

The work during the past season, removed a few remaining shoal spots.

At the Lump, dredging in 1910, 1911 and 1913 produced a depth of 22 feet throughout the shoal in a cut 300 feet wide. The length of this shoal is about one mile.

In the past season, it was again gone over and as the material of both shoals, but particularly of the Lump, is of a shifting nature dredging to maintain the depth will be necessary at short intervals.

The *Restigouche* or departmental dredge *No. 3* worked on the Lump on July 20-22, July 31, August 4 to 7 and August 14, removing 14,973 cubic yards, barge measurement, of sand, and on the Horseshoe on July 23 to 30, August 1 to 4 and August 10 to 13, 1914, removing 19,623 cubic yards of sand and gravel.

MISCOU.

Miscou Island, Gloucester county, is about nine miles long by 4½ wide and forms the extreme northeastern corner of the province of New Brunswick. The population is about 500. The chief occupation is fishing, which is carried on extensively.

A public wharf was constructed in 1905, at Miscou harbour, the general landing place for the island, and was extended in 1911 and 1912 to a total length of 1,776 feet.

Between March 28 and 31 and April 14 and 18, 1914, a small freight shed 20 feet long and 10 wide was built on the wharf at a cost of $95.17.

On October 15 and 16 and between 21 and 26, 1914, work was again in progress in laying a strip of 2-inch plank longitudinally over the old 3-inch covering in a length of 870 by 9 feet wide on the old section of the wharf and renewing several broken planks. 16,000 feet b.m. of lumber was used.

The expenditure for the fiscal year was $520.67.

NORTHWEST MIRAMICHI RIVER.

The shoals are located on the upper 4 miles of the navigable section and 11 to 15 miles above Newcastle. A large amount of lumber, lumbermen's supplies, etc., are rafted or scowed on the river and a least depth of 5 feet at low water is required for the towboats as well as for the river steamer making daily trips to the head of navigation.

On August 18, 1913, a contract was entered into with Mr. Peter England for dredging on this river at 37 cents per cubic yard, barge measurement.

Under this contract, the dredge *Peter England* worked in 1913 on the two lower shoals, the Mullin's Wharf bar and at Cassilis.

During 1914, between July 9 and September 28, a shoal section 15 by 400 feet at Cassilis, partly left in the previous years work and partly formed afterwards by deposit, was removed making the dredged cut 60 to 100 feet wide and 1,320 feet long.

The two upper shoals were dredged between the same dates,—one about ⅔ of a mile below Redbank which is 880 feet long by 100 wide, and one at Lawlor's Shore 1½ miles below Redbank where two cuts were required 1,100 and 350 feet long, the general width being 100 feet increased to 120 at the upper and 150 at the lower end. The depth reached was 5 to 6 feet at low water ordinary spring tides.

The material, which is sand or sand, gravel and mill refuse, removed during 1914-15, amounted to 14,004·3 cubic yards, barge measurement.

The expenditure for the fiscal year, including $203.88 for inspection and $30 for blasting and removing a large boulder, was $5,415.47.

OAK POINT.

Oak Point is situated on the western shore of the St. John river in the Long reach, 25 miles from St. John and 59 miles from Fredericton.

Dredging was for the purpose of making the low water wharf easily accessible for the arrival and departure of steamers.

The area dredged over was approximately 400,000 square feet to a depth of 11 feet at low water.

The material removed was sand and gravel.

The total quantity removed, including excavation outside ranges and below subgrade was 53,887 yards, place measurement.

The contract rate of payment was 19½ cents per yard, place measurement, the contractors, the Maritime Dredging and Construction Company but was performed by the New Brunswick Construction Company under agreement, being entitled to receive payment for the removal of 41,200 cubic yards, amounting to $8,034.00.

Work was performed by the *New Brunswick No. 1* which began work on May 2nd and withdrew to Maquapit lake on 22nd, returning to Oak Point on July 2nd and completing on July 24.

PETIT ROCHER.

Petit Rocher, Gloucester county, is a fishing and farming settlement on the Baie des Chaleurs 12 miles north of Bathurst. A breakwater was constructed here between 1905 and 1908.

Between 15th and 31st March, 1915, slight repairs were made of damage caused by a storm in November, 1914. Two sections 14 by 18 feet and 28 by 12 feet, where the covering was torn off were refilled with 30 cubic yards of ballast, and 2,500 feet, b.m., of new plank was laid. A washout in the roadway approach was in part repaired. Fifty cubic yards of large stone blocks were procured for placing along the face of the breakwater.

The expenditure for the fiscal year was $250.75.

PORTAGE RIVER.

Portage river, Kent county, is a small stream entering the Northumberland Strait about 5 miles south of Point Sapin and 6 miles north of Kouchibouguac.

During the fiscal year 1914-15, work was in progress on the construction of breakwaters and breastworks to protect a proposed new and direct entrance to the lagoon at the river mouth, and of a dam to close the present unstable and shallow entrance. Of this work, the breastworks were partially completed last year.

Between 4th July and 8th August and 19th August and 30th October, 1914, and between 17th and 29th March, 1915, the north breakwater 83 feet long and the south breakwater 43 feet long were constructed, the former being complete except that additional stone and brush will be required. In the latter, the main piles were driven and cross-ties and part of the walings were placed and the inner face was sheet-piled with 3 inch plank. It requires close-piling on the outer face, and to be filled with brush and stone. The south breastwork 335 feet long and 157 feet of the north breastwork were sheet-piled with 3 inch plank. About 50 feet of the north and 200 feet of the south breastwork was filled behind the sheet piling with brush, stone and sand.

A dam of brush mattresses weighted with stone was constructed at the old entrance. The dam is 180 feet long, 15 wide and about 6 high and beyond, a narrow brush dam was built 30 by 5 feet.

A beginning was made in excavating between the breastworks to start the water through the new entrance.

The expenditure for the fiscal year was $2,498.70.

QUACO.

Quaco, or St. Martin's, St. John county, is situated on the Bay of Fundy coast, 34 miles east of St. John. At Quaco, the department has built two close-faced, cribwork breakwaters, one on either side of the outlet of Vaughan's creek. These breakwaters enclose a harbour of considerable size, which gives shelter to vessels at high water. The pier on the east side is 554 feet long and 20 feet wide on top, with a depth of 23½ feet at high water at the end. The west pier is 302 feet long and 20 feet wide on top. Spring tides rise 30 feet.

On May 19, 1913, a contract was let for the construction of a wharf in this harbour, consisting of two cribwork walls, 230 feet and 195 feet long respectively, and 20 feet wide, forming a right angle, the space enclosed by these walls to be filled with gravel and earth filling. The work was completed in 1913-14, with the exception of a small portion of the cap, covering, filling and close-piling. Work was resumed on April 20, and by June 19, 1914, was satisfactorily completed.

A heavy rain on January 19, 1915, caused a freshet in Vaughan's creek. This freshet undermined the eastern breakwater extension for a distance of 150 feet, causing a maximum settlement of 7 feet on the harbour side, at the outer end. In order to prevent any further damage from spring floods, a protection, consisting of 250 cubic yards of stone and 39 loads of brush, was placed along the inner side of the work. A hole, scoured out near the new wharf, was filled with brush and ballast.

The day labour work was begun March 4, and completed March 31, 1915.

Expenditure for fiscal year 1914-15, was $4,337.21.

RESTIGOUCHE RIVER.

*Ship Channel.*

Between October 7 and November 12, 1914, the Government dredge *St. Lawrence* or *No. 2*, was at work in the ship channel of the Restigouche river, on the range of the Campbellton lights, and about 2,900 feet below the Campbellton deep water wharfs.

An area about 1,200 feet long by 100 wide was dredged with depths of 17 to 18 feet at low water ordinary spring tides, 28,000 cubic yards barge measurement being removed.

On this range, dredging has in late years been carried on over a length of 3,500 feet out of a total of 5,200 feet of channel, which required deepening.

The total length of shoal water in the ship channel below Campbellton is about 3¾ miles. Yearly dredging is required to maintain the depth.

REXTON.

Rexton, Kent county, lies on the Richibucto river, about 6 miles above its mouth.

Dredging was asked for in the berth in front of the public wharf to remove a bank and enable vessels to lie close to the face, where were formerly depths of 7 to 14 feet at low water.

The wharf is 250 feet long and the average width of the bank to be removed out to the 15-foot contour, the required depth is 30 feet.

Dredging was in progress in 1914, by day labour, between October 24 and November 23, when 615 cubic yards, barge measurement, were removed, increasing the depth in the berth to a minimum of about 11½ feet.

The material was mud, shells, rubbish, etc., firmly compressed on top and was with difficulty removed by the small orange peel dredge, which was hired for $13 per day, including wages of engineer, gasoline, etc.

On account of the lateness of the season when this dredge was procured, the work was not completed.

The cost of the dredging was 73 cents per cubic yard, barge measurement, and the total expenditure was $448.28.

RICHIBUCTO.

*Public Wharf.*

Richibucto, the shire town of Kent county and the terminus of the Kent Northern railway, has a population of 612. The public wharf at Richibucto was acquired from the municipality in 1908-09.

Between June 22 and July 30, 1914, work was in progress on the public wharf and the retaining wall built at the inner end of the public dock, between the public wharf and Forbes wharf.

The work consisted of levelling the space behind the retaining wall and surfacing the interior of the public wharf with about 1,850 cubic yards of stone and gravel. The

outer face of the wall, 58 feet in length, and 38 feet of the public wharf, were sheathed with 3-inch plank, a 10- by 12-inch cap was placed across the retaining wall and along the face of the wharf for a length of about 300 feet. Twelve ¾-inch ring bolts and four ladders were placed on wharf and six ⅝-inch ring bolts on the retaining wall.

The expenditure for the fiscal year was $955.52.

### RICHIBUCTO BEACHES.

The Richibucto river enters the Northumberland strait 3 miles below the town of Richibucto, about 26 miles south of Miramichi bay and 40 miles north of Shediac.

Works intended to protect the beaches at each side of the entrance and to increase by scour the depth over the bar outside, were begun on the north beach in 1873.

On July 7, 1914, a contract was entered into with Engineers and Contractors, Ltd., of St. John, N.B., for the construction of extensions to the breakwaters at the north and south beaches.

Work on the contract, which is on a unit price basis, began May 27, 1914, and by November 3 the extension to the north breakwater was completed.

The extension is 270 feet long and 16 wide and consists of a stone embankment 26 feet long, laid over the end slope of the old work, and a pile breakwater 244 feet long, composed of forty-two braced pile bents of three piles each close-piled at the outer end and on each side. The outer end and a length of about 18 feet on either side is doubly close piled; the piles are driven through brush mattresses which, outside the pilework, support slopes of large stone reaching up to low water level. The interior is filled with brush and stone.

The extension of the southern breakwater was not begun.

The expenditure for the fiscal year was $23,884.27, including $411 for inspection and $473.27 for putting the pile-driver and engine in condition for work.

### RICHIBUCTO CAPE.

Richibucto Cape lies 6 miles southeast of the entrance to Richibucto harbour and 5½ miles north of Chockfish river. The distance from Richibucto Cape to Prince Edward Island is 14½ miles. The inhabitants of Richibucto Cape, Richibucto village (2 miles inland) and the neighbourhood number 1,000, engaged in farming and fishing.

The construction of a breakwater was begun in 1908.

Between August 14 and November 24, 1914, a block 30 by 30 feet on top, of square-faced cribwork, was built twenty-one tiers high to form the end block of the guard pier which projects from the shore 180 feet south of the main breakwater; the approach was built, for a length of 60 feet, 10 feet wide and 8 tiers high, and covering and cap-timbers were placed on a section of the main breakwater, thus completing the latter.

The expenditure for the fiscal year was $2,009.07.

### RIVER'S MILLS.

River's Mills is situated on the eastern side of Grand bay on the St. John river about 2½ miles from St. John.

Dredging was for the purpose of removing an old pier which had been a great menace to small craft and a hindrance to lumbering operations.

Dredging was performed to a depth of 11 feet at low water.

The material removed consisted of clay, stone and old cribwork.

Dredging was commenced on September 11, 1913, by the *New Brunswick No. 1* of the New Brunswick Construction Co., and was suspended on September 25 after the removal of 7,031·6 yards, scow measurement, at an expenditure of $1,828.22 at 26 cents per yard.

Dredging was recommenced on April 20, 1914, by the *New Brunswick No. 1* and completed April 30, the removal for this period being 4,099·8 yards, scow measurement, at a cost of $1,085.94.

The contract rate of payment was 26 cents, the contractors, the New Brunswick Construction Co., being entitled to receive a total payment of $2,894.16 for the whole work, the amount due for 1914 being $1,065.94.

RIVER ST. JOHN AND TRIBUTARIES.

On August 27, 1914, snagging was commenced on the St. John river and was completed on October 21; during this period, the river and its tributaries between St. John and Fredericton, were cleared of all sunken logs, snags, or other obstructions which were a menace to navigation, approximately 479 snags or sunken logs being removed, which were either cut up and burned or hauled up on the shore above high water mark.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $1,967.70.

RIVER ST. JOHN AND TRIBUTARIES, UPPER.

*Baker Brook, Madawaska county.*

Work performed at Baker brook during this season consisted of blasting 14 cubic yards at Murray falls, 10 miles from mouth of the river. At 15 miles from the mouth, 41 cubic yards and one boulder measuring 6 yards were blasted, also 25 boulders measuring from 24 to 36 cubic feet and obstructions were removed from channel. The distance of river worked was about 6 miles.

On September 2, work was commenced, and was completed on October 1.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $299.70.

*Baker Lake, Madawaska County.*

The work performed at Baker lake consisted of the laying of 170 square feet of planking for flooring, 1,056 square feet on the side of the wharf and 156 square feet on the front.

The work was commenced on September 7 and completed on the 14th of the same month.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $98.03.

*Bear Brook, Victoria County.*

Work performed at Bear Brook this season consisted of clearing the channel for a distance of ½ mile by removing obstructions and replacing spoilings in dam 160 feet long, 7 feet high and 15 feet wide at bottom.

Work was begun on 12th August, and completed on 28th .

The total expenditure for the fiscal year ending March 31, 1915, amounted to $199.60.

*Grand Falls to Aroostook, Victoria County.*

Work during this season consisted of blasting seven boulders measuring 47 cubic yards, about 3 miles above Aroostook Junction.

Work was commenced on 11th November and completed on 30th.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $200.

*Grand River, Madawaska County.*

The work at Grand river, this season, consisted of removing obstructions and blasting boulders from the channel of the river for a distance of about 15 miles, commencing one mile from mouth of the river. At 15 miles from the mouth of the river, a new channel was cut, measuring 290 feet long, 16 feet wide and 5 feet deep. A breakwater measuring 250 feet long, 8 feet high and 6 feet wide, filled with rocks, was built.

Work was commenced on 1st September and completed on 19th of the same month.

The total expenditure for the fiscal year ending March the 31st, 1915, amounted to $405.41.

*Green River, Madawaska County.*

The work performed on Green river consisted of clearing the channel by removing obstructions and rocks for a distance of 20 miles. Between 1st and 3rd Lake, obstructions were removed and a few boulders blasted. At a distance of 4 miles from 1st Lake a new channel 10 rods long, 12 feet wide and 3 feet deep was cut.

The work was commenced on 13th July and completed on 24th. This work was done at an expenditure of $403.05.

During the period, 21st September to 5th October, further work was done, a breastwork 222 feet long, 6 to 9 feet wide, 3½ to 6½ feet high being filled with rocks and bolted with ¾-inch iron; the expenditure being $351.89.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $654.94.

*Iroquois River, Madawaska County.*

During this season, a breastwork was built 82 feet long, 6 wide and 6 feet high, filled with rock. At 22 miles from mouth of river, a breastwork was built 208 feet long, 7 wide and 5 feet high, filled with rock, and a breakwater was filled with rock, 181 feet long, 7 wide and 7 feet high.

At about 22½ miles from mouth of river, three small breakwaters were built:—

No. 1 63 feet long, 6 wide and 3 feet high }
No. 2 100 feet long, 6 wide and 4 feet high } Filled with rock.
No. 3 40 feet long, 5 wide and 4 feet high }

The total expenditure for the fiscal year ending March 31, 1915, amounted to $509.94.

*Little St. Francis, Madawaska County.*

Work performed on the Little St. Francis river consisted of clearing the channel by the removal of rocks and obstructions for a distance of four miles. At four miles from the mouth of the river, a new channel, 3 rods long, 15 feet wide and 2 feet deep, was cut.

Work was commenced on 7th September and was completed on 16th of the same month.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $100.32.

*Little Tobique River, Victoria County.*

Five cribs were built at this place as follows:—

| | |
|---|---|
| No. 1 | 125 by 17 feet |
| No. 2 | 175 by 17 feet |
| No. 3 | 129 by 17 feet |
| No. 4 | 77 by 16 feet |
| No. 5 | 16 by 10 feet |

Five cuts were also made, as follows:—

No. 1.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. 145 by 25 feet
No. 2.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. 91 by 25 feet
No. 3.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. 127 by 25 feet
No. 4.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. 75 by 25 feet
No. 5.....162 feet long, cleared with dynamite.

Work was commenced October 12th and completed December 19th.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $1,950.19.

*Main Tobique, Victoria County.*

Work at this place consisted of hauling 10 cords of rocks for Sadler's breakwater and replacing 8 piers. About 15 cords of rocks were hauled for Flander's breakwater, and 8 piers placed. Both these breakwaters are about 4 miles above Plaster Rock.

Work was commenced on January 16 and completed on January 28.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $190.77.

*Muniac Rapids, Victoria County.*

The work at Muniac Rapids consisted of making improvements and blasting a rock measuring 27 cubic yards.

On September 21, work was begun and was completed on September 30.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $130.

*Quisibus River, Madawaska County.*

The work on Quisibus river consisted of building a breakwater 72 feet long, 6 feet wide and 4½ feet high.

Work was commenced on Jnly 14 and completed on July 23.

The total expenditure for the work performed on the Quisibus river for the fiscal year ending March 31, 1915, amounted to $100.80.

*Red Rapids, Victoria County.*

Work at Red Rapids consisted of building a pier 33 feet long at bottom, 24 feet at top, 15½ feet wide, 6½ feet high filled with rocks, and blasting about 25 cubic yards of rock.

The work was commenced on August 22, and completed on November 7.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $203.05.

*Riley Brook, Victoria County.*

Work at Riley brook consisted of adding 3 feet of new work to breakwater of 324 feet, built in 1913, and building an extension 76 feet long and 10 high to old breakwater. The fill between breakwater and river bank is about 17 feet wide, one-third of which is roots, bushes, etc.

This work was commenced on October 7, and completed on October 13.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $422.63.

*Rocky Brook, Madawaska County.*

Work performed at Rocky brook consisted of removing obstructions from the brook, blasting boulders and cutting a tow-path, work beginning a distance of 4 miles from mouth of the river.

Work was begun on September 21, and was completed on September 29.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $99.39.

*Siegas River, Madawaska County.*

Work performed on the Siegas river consisted of removing obstructions from the river for a distance of 5 miles. At about 4 miles from the mouth of the river, 30 cords of rocks were hauled to protect the river bank at three different places.

Work was commenced on August 3 and completed on 18 of the same month.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $149.

*St. Francis River, Madawaska County.*

Work performed on the St. Francis river consisted of cutting a channel 930 feet long and blasting and removing rocks from the river for a distance of 200 rods.

On July 20, work was commenced and on 29th was completed.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $200.25.

*Tobique Narrows, Victoria County.*

Blasting was performed on the Tobique narrows, one rock 30 by 100 by 9 feet being blasted, measuring about 500 cubic yards.

Work was commenced on September 14, and was completed October 17.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $498.20.

*Tobique Rock, Victoria County.*

Work performed at this place consisted of blasting about 41 cubic yards of rock.

Work was commenced on August 13, and was completed on 26th of the same month.

The total expenditure for the fiscal year ending March 31, 1915, amounted to $233.45.

*Trout River, Madawaska County.*

At Trout river, 2 miles from the mouth, a breakwater 188 feet long, 6 feet wide and 4 feet high, bolted with ¾-inch bolts and well filled with rocks, was built. At about 8 miles from the mouth of the river, another breakwater 304 feet long, 6 feet wide, 4½ feet high, bolted with ¾-inch iron and well filled with rock, was built.

Work was commenced on September 5, and was completed on September 26.

The total expenditure during the fiscal year ending March 31, 1915, amounted to $397.39.

ST. ANDREWS.

St. Andrews, Charlotte county, is a terminus of a branch of the Canadian Pacific railway, and lies, by water, 50 miles west of St. John. An extension of the public, or what is known as the market wharf, was built by the department in 1909-10. The extension consists of a pile approach, 468 feet long and a pier-head of square cribwork, 36 by 70 feet. There is a depth of 34 feet at high water at the end of the pier-head.

During 1914-15, the movable slip was repaired by attaching two additional counterweights, and the covering of the wharf was repaired. The floating slip, which had been carried adrift by a storm, was replaced and fastened by means of new timbering and chains.

Work was carried on during August, 1914, and January and February, 1915.

Expenditure for fiscal year 1914-15 was $254.26.

ST. CHARLES.

The St. Charles river flows into the northwest arm of Richibucto harbour, about four miles northwest of Richibucto. The river is navigable for small boats for about five miles or as far as the upper highway bridge, and drains a good farming district.

Between June 20 and July 4 and July 13, and 15, 1914, two ramps or slips, for the use of teams in taking loads of mussel mud from scows, were excavated in the river bank near the upper bridge, the excavation next to the shore being about 5 feet deep, and a sloping platform of 3-inch plank 25 by 20 feet, over stringers and cross-ties, was laid in each slip. A culvert 26 feet long by 3 wide covered with 3-inch plank was built across the ditch in the roadway approaching the shore. The river bank for a length of 180 feet was faced with logs, longitudinals and cross-ties, filled inside with material excavated from the river bottom, the excavation being also intended to improve the berths for scows, and the river was cleared of old trees and stumps on a length of about 1 mile.

The expenditure for the fiscal year was $386.80, which includes $75 expended on the purchase of the site, and is the total to date.

*Dredging.*

Dredging was asked for to enable scow loads of shell mud, used as a fertilizer, of which about 125 scow loads or 2,500 cubic yards were dug last season, to be delivered at the farms along the river and at a storage point at the head of navigation.

A small orange peel dredge was hired for $14 per day including wages of engineer and cost of oil and gasoline, and dredging was begun in 1913 when cuts were made over three shoal spots having a total length of about 1,600 feet.

The work was continued between July 24 and September 18, 1914, when three additional shoals were dredged covering a total length of about 1,400 feet, the width of cut being about 24 and depth 1 to 2 feet.

Two training walls of logs, stone, brush and dredged material were built to direct the current through the cut. The walls are about 12 feet wide, 1½ to 2 high and 630 feet in total length.

The total dredging amounted to about 3,400 cubic yards, barge measurement, which cost with the work on the training walls, 37 cents per cubic yard.

There remains about 2,075 feet of channel which still requires dredging.

The expenditure for the fiscal year was $1,301.46.

ST. CROIX RIVER.

In 1911, an arrangement was entered into with the United States Government whereby the Department of Public Works of Canada agreed to contribute 10 per cent of the cost of dredging a channel in the St. Croix river, which forms part of the boundary line between New Brunswick, Canada, and Maine, United States. The total estimated quantity to be removed was 443,835 cubic yards.

On February 9, 1912, the United States Government entered into a contract with the Bay State Dredging Company, of Boston, Mass., for the first instalment of dredging, namely, 226,920 cubic yards. Work was begun on May 17, 1912, and on September 27, 1913, the dredging covered by the first contract was completed. The total quantity removed under the first contract was 237,420 cubic yards, scow measurement.

On September 22, 1913, the United States Government entered into a second contract with the Bay State Dredging Company for the removal of 140,000 cubic yards, scow measurement. The work to be done consisted in continuing the improvement of St. Croix river by dredging a channel to 9 feet at mean low water, from the upper end of the section covered by the first contract, to the widening in the channel opposite the public landing at St. Stephen. During 1913-14, a total quantity of 178,350 cubic yards, scow measurement, was removed, 109,541 cubic yards from the area covered by the first contract, and 68,809 yards from the second.

During 1914-15, the Bay State Dredging Company's dredge *No. 4* removed a total quantity of 175,407 cubic yards, scow measurement, of mill waste, mud, gravel, saw-

dust and logs, and 11 cubic yards of boulders. Dredging for the season was resumed on June 15, and on December 28, 1914, the second contract was completed. It is expected that dredging improvements will be continued next season under a third contract.

Canada's share of the cost of the dredging done in 1914-15 is as follows:—

| | |
|---|---|
| Ten per cent of— | |
| 175,407 cubic yards at 19⅛ cents | =$33,546 59 |
| 11 yards at $10 | = 110 00 = |
| Total | $33,656 59 |

ST. GEORGE.

St. George, Charlotte county, a small but flourishing town, situated at the head of tide on the Magaguadavic river, is chiefly noted for lumbering and for the numerous monumental works established there to manufacture the red granite found in the neighbourhood. The departmental wharf at St. George is of round cribwork, 154 feet long and 63 feet wide, with a height of 24·8 feet at the outer end.

During 1914-15, a portion of the stringers was renewed, and the whole of the top of the wharf, 154 by 63 feet, was recovered. Ten new fenders were placed on the work, and the tops of ten old fenders were renewed.

Work was begun July 8 and completed August 19, 1914.

Expenditure for fiscal year 1914-15 was $1,190.17.

ST. JOHN HARBOUR.

*Courtenay Bay.*

On March 25, 1912, a contract was entered into with the Norton-Griffiths Co., for the construction of harbour improvements in Courtenay bay, or east side of St. John harbour. The works consist in building a breakwater, 4,570 feet long, of rubble stone deposited on the beach which is from 6 to 8 feet above low tide, the top of the breakwater being 13 feet above high tide (ordinary maximum spring tides rise 27 feet); the construction of two piers on the northern side of the bay, these piers are 800 feet long, 300 feet wide and are to be built of timber cribwork sunk in 34 feet of water at low tide on which a concrete superstructure 21 feet high will be built; the excavation of a basin inside the breakwater and a channel leading thereto from the main entrance channel of the harbour, the total quantity of dredging being approximately 11,000,000 cubic yards, the approximate estimated cost of the work will be $7,500,000 the contract is stipulated to be finished in 1917.

In connection with the works, the contractors are bound to build a dry dock, 900 feet long with an entrance 110 feet wide; the dock is to be constructed and equipped under the Dry Dock Subsidy Act of 1910.

During the year 1912-13, the work was confined to the construction of the stone breakwater.

During the year 1913-14, the construction of the breakwater was continued with satisfactory progress, being completed for a total length of 4,000 feet, partly protected with coverstone. The dredging amounted to 551,469 yards, considerable delay being experienced owing to stormy weather, loss by sinking of one of the dredges, etc.

During the year 1914-15, the interior part of the breakwater was completed to its full length of 4,570 feet. The exterior 6-foot layer of large size coverstone has been carried forward so that it now covers three-quarters of the seaward side, also short distances, namely, 350 feet and 170 feet on the top and shoreward side, respectively. A pier head of concrete on pilework was constructed at the end of the breakwater, up to the present elevation of the rock fill. After the coverstone is placed at this point,

the pier-head will be completed. The remaining two groynes have been completed.

The dry dock excavation has been completed for its total length, and about a third of the depth, the material from it being used in the breakwater.

In the basin, the suction dredge excavated 886,380 yards, during the year, digging a basin about 30 acres in extent and to an average depth of 10 feet below low water.

The two ladder dredges have opened up half the width of the channel from the main harbour channel into the basin, giving from 10 to 20 feet of water at low tide, and are now widening the cut to the full 500-feet width at this depth. A total of 1,055,977 yards has been removed from the basin, and 1,854,747 yards from the channel during the year.

The expenditure during the fiscal year was:—

| | |
|---|---|
| Breakwater | $ 304,627 90 |
| Dredging | 828,406 17 |
| | $1,133,034 07 |

BEACON BAR.

On December 12, 1911, a contract was entered into with Mr. M. Connolly for the construction of 1,960 lineal feet, face measurements, of cribwork, 42½ feet high, to be sunk in 34 feet of water at extreme low tide, and reaching the level of 8½ feet above low tide, on which a concrete superstructure 22½ feet high is to be built to the level of 4 feet above high water spring tide; ordinary maximum spring tides rise 27 feet.

During the month of June, 1912, public tenders were called for an additional length of 1,660 feet of the same class of work; the contract was awarded to the same contractor. The total length of continuous lines of cribwork and concrete superstructure being 3,620 feet, forming three berths; the contracts are at schedule rates and the estimated cost was $1,335,569; work was commenced June, 1912. The first contract was to be completed in December, 1913, and the second in December, 1914.

During the fiscal year, 1912-13, 628 feet of cribwork were sunk in place; no other part of the work being performed, and the amount paid to the contractor was $181,894.68.

During the fiscal year 1913-14, 902 feet of cribwork was sunk and partly ballasted, and the concrete superstructure partly built over a length of 284 feet, a total of 2,898 cubic yards.

On December 8, 1913, during a very severe storm, two cribs, forming a total length of 443 feet, were partly carried away; these cribs had been sunk only a few days previous to the storm and were not fully ballasted; they parted near the level of the ballast, their bottoms remaining in place.

As the first contract was not completed at the date specified, and it being evident that Mr. Connolly could not complete the second as agreed, the department decided to cancel his contracts and accept the offer of the Maritime Dredging and Construction Co., Ltd., to complete the works at the rates of the first contract and on the basis of cost plus 15 per cent for any works partly done, including the removal of bottoms of the broken cribs, replacing the parts of cribs carried away by the storm, levelling the cribs already sunk, completing the ballasting, etc.

A settlement was arrived at with Mr. Connolly before the end of the fiscal year and the present contractors started their work in the month of April, 1914.

The dredging of crib sites and the filling at the back of the cribwork and concrete superstructure are done under separate contracts.

During the fiscal year of 1914-15, record work was done by the contractors, both in regard to cribwork and to concrete wall construction.

The bottoms of the broken cribs were removed and the balance of them placed. Foundations were dredged, prepared, and the building, placing and levelling up of the

rest of the cribwork was successfully accomplished, a total of 2,342 lineal feet of cribwork being placed in position.

The pouring of concrete started in May, 1914, and was suspended January 14, 1915; starting again on March 29, 1915. During this time, 3,200 lineal feet of wall was constructed, containing 35,774·5 cubic yards of concrete. This formed the first slip, and the north side and part of the head of the second, making berth 15, on the north side of the first slip, available for the winter's steamship traffic.

The expenditure for the fiscal year 1914-15, was as follows:—

| | |
|---|---|
| First contract | $ 436,673 89 |
| Second " | 710,478 86 |
| | $1,147,152 75 |

*Temporary Shed and Berth 15 Equipment.*

An agreement was made with the Maritime Dredging and Construction Co., Ltd., during September, 1914, to construct, on a cost plus 15 per cent basis, a temporary wooden freight shed, 505 feet long and 80 feet wide, on the recently made embankment behind the new wharf wall on the north side of No. 1 slip, termed berth No. 15, so that this berth would be available for the winter steamship traffic.

Work was commenced September 23, and the shed itself was completed on November 14, and on December 10, publicly opened by the Hon. Mr. Rogers, who then formally handed it over to Hon. Mr. Hazen to be operated by the Marine and Fisheries Department. A week after this date, the shed was full of merchandise. The shed is being used exclusively for shipments consigned to the British Government.

The shed was equipped with three offices, passenger and freight gangways and electric lighting installed. Platforms were built between it and the face of the wharf and at its ends, and a track depression levelled off at the rear, a retaining wall platform built and a railway spur with two sidings was laid to connect with the Canadian Pacific Railway line running to their new elevator. A gear shed was built at the eastern end of the shed where ropes, etc., could be thawed and dried out in cold weather. Floating fenders were built to prevent the steamers chafing the wharf, and mooring posts were placed to take the breast lines from the vessels.

A permanent 8-inch water main was laid from the city pipe on Protection street as far south as the reclamation embankment extended, and from there, temporary 3-inch and 6-inch pipes were run the rest of the distance, the former being service connection at the face of the wharf for supplying steamships and the other two supplying fire hydrants at the rear of the shed. These hydrants were equipped with the necessary hose and reels, the last being protected by small sheds.

A sewer has been extended from near the C. P. Ry. elevator, towards the slip, as far as the reclamation embankment has progressed at present.

During the fiscal year, the expenditure has been:—

| | |
|---|---|
| Shed | $20,360 46 |
| Platforms and equipment | 16,745 50 |
| C. P. Ry. sidings | 5,160 77 |
| Pipe line | 6,313 46 |
| Sewer pipe line | 946 46 |
| | $49,526 65 |

*Permanent Shed Foundations.*

In June, 1914, the Government entered into an agreement with the Maritime Dredging and Construction Company, Limited, for the construction of the foundations for the permanent shed "A" on the site where the temporary shed is built at present.

Owing to the necessity of building this temporary shed, outside of the purchase of piles and other materials, no work was done during the year, the plan being to proceed with the building of the foundations for the shed on the pier during the coming season, leaving the construction of the "A" until some later date.

The expenditure during the fiscal year was $6,666.69.

SAND POINT.

*Shipping Galleries.*

In order to facilitate the shipping of grain from berths Nos. 5 and 6 of the Sand Point Basin, and thus obviate the necessity of moving vessels across the slips to berths Nos. 3 and 4, which are provided with grain conveyors from the old Canadian Pacific Railway Company's elevator, the department decided to complete the conveyor equipment for these wharfs.

In the month of September, 1913, a contract was entered into with the John S. Metcalf Company to build wooden galleries partly over the existing freight sheds and partly over city property; the conveyors are connected to both the old and the new Canadian Pacific Railway Company's elevators, and consist of 1,609 lineal feet of double belt and 687 feet of single belt galleries. The belts along the faces of the berths are provided with trippers and 19 dock spouts supported by derricks.

The belts are driven from three towers by seven electric motors of 400 horse-power total capacity.

The work under this contract was satisfactorily completed at the beginning of March, 1914. Owing to the impossibility of procuring electric power at that time, the conveyors were not used last season.

Arrangements were made with the Canadian Pacific railway to supply power and operate these galleries for the Government, as part of their own elevator system, so a switchboard was installed in their new elevator power-house, and the necessary connections made from it to the conveyor power wiring. Telephone and signal systems were installed; fire partitions built at intervals along the galleries, and hinged extension trimmer spouts furnished for the dock spouts, etc.

Preparatory to the Canadian Pacific railway taking over these galleries in December, 1914, considerable work of a cleaning and adjusting nature was necessary after the several months of idleness, and after the machinery was put in operation, a number of minor improvements to add to the ease and safety of operation were added as necessity required; this included the addition of extra telephones, electric lights, etc.

The expenditure, during the fiscal year, was as follows:

| | |
|---|---|
| Switchboard, panel, power line Canadian Pacific railway power-house, telephones and signal systems | $6,472 59 |
| Trimmer spouts | 220 00 |
| Fire partitions | 450 00 |
| Overhauling and additions | 1,301 64 |
| | $4,444 23 |

The total of the amounts expended in the harbour of St. John during the fiscal year 1914-15, is as follows:—

| | |
|---|---|
| Beacon Bar, first contract | $ 436,673 89 |
| Beacon Bar, second contract | 710,478 86 |
| Beacon Bar inspection | 6,742 78 |
| Courtenay Bay | 1,133,034 07 |
| Courtenay Bay inspection | 20,193 80 |
| Reclamation | 161,204 10 |
| Conveyors | 8,444 23 |
| Shed, equipment, etc. | 49,526 65 |
| Shed foundations | 6,666 69 |
| Staff salaries | 13,154 83 |
| Expense and disbursement | 5,053 64 |
| | $2,551,173 54 |

BEACON BAR.

*Dredging.*

During the year 1914-15, work was continued on the contract, let on May 10, 1909, to the Maritime Dredging and Construction Company, for dredging the sites of proposed deep water docks at Beacon Bar, St. John Harbour, N.B. The proposed depths are 32 feet at low water in the berths and channel, and 36 feet at low water on the crib sites, exclusive of sub-grade. The total amount removed under this contract, to March 31, 1914, was 6,525,571·49 cubic yards, scow measurement.

On May 30, 1914, an extension to the area of the original contract was granted at a reduced rate of 34 cents per cubic yard, scow measurement, for class B material; while work on the original contract continued at the contract rate of 39½ cents per cubic yard. On August 17, 1914, the price of work on the original contract was also reduced to 34 cents per cubic yard. Work on this contract was still in progress on March 31, 1915.

From April 1, to August 10, 1914, a quantity of 361,980 cubic yards, scow measurement, class B material, was removed from the original contract area, at the contract rate of 39½ cents per cubic yard; and from June 8, 1914, to March 31, 1915, a quantity of 1,130,867·1 cubic yards, scow measurement, class B, and 38·7 cubic yards, class A material, was removed under the extension rate of 34 cents. The material removed consisted of mud, gravel, sand, clay and a few boulders.

The cost of the dredging during 1914-15 was as follows:—

| | |
|---|---|
| 361,980·3 cubic yards, class B, at $0·395 = | $142,982 21 |
| 1,130,867·1 cubic yards, class B, at 34 cents = | 384,494 81 |
| 38·7 cubic yards, class A, at $4.90 = | 189 63 |
| Total | $527,666 65 |

Of the material removed, 1,177,477·2 cubic yards were used as filling in connection with the new docks at Beacon Bar, and 315,408·8 cubic yards were deposited at sea.

Four dredges, the *Beaver, Cynthia, Iroquois,* and *St. John,* were employed on the work during the year 1914-15, but were not in operation continuously.

On December 5, 1914, arrangements were made with the Marine and Fisheries Department for changing the buoys at the entrance to the harbour so that the channel used by vessels would cross the area dredged under the Beacon Bar contract. This change necessitated the removal of the buoy formerly used to replace Spit Beacon,

and the placing of two buoys, one on either side of the channel, at its narrowest point. The change made gives a straight channel from the bell buoy to a point west of the old Spit Beacon, from whence vessels proceed directly up the harbour. The present channel affords a much better and more easily navigated passage at all times of tide. The centre line of the main channel has been marked by red range lights, placed by the Marine and Fisheries Department.

*Backfilling for Wharf.*

On February 1, 1913, a contract was entered into with the Maritime Dredging and Construction Company, Ltd., for earth filling at the back of the lines of crib-work and concrete superstructure being built on the Beacon Bar, at a price of 15 cents per cubic yard.

During the fiscal year 1914-15, the filling amounted to 1,074,694 cubic yards, for which the sum of $161,204.10 was paid the contractors.

*Foul Ground.*

The work of dredging the harbour channel to a 30-foot grade has been carried on throughout by the departmental dredge *Fielding*, but it was found that this dredge, which is of the ladder type, was incapable of removing the stiff clay and boulders encountered near the head of the channel, on what is known as the foul ground. Owing to this, tenders were called, and a contract was entered into on May 30, 1913, with the Maritime Dredging and Construction Company, Limited, for the removal of 35,000 cubic yards, scow measurement, of clay, gravel and boulders, at $6.90 per cubic yard for class A, and 49½ cents per cubic yard for class B material, the work comprising the removal of all material overlying ledge rock at the point of the foul ground. An extension of the contract for the removal of 12,000 cubic yards, scow measurement, additional was authorized in December, 1913.

During 1913-14, a quantity of 38,646·7 cubic yards, scow measurement, of class B material, and 84·78 cubic yards of class A material, was removed from an area of approximately 350,000 square feet between the 12th of August and the 31st of the following March.

During 1914-15, an order was received to push the work to completion. Between June 16, 1914, and February 20, 1915, the Maritime Dredging and Construction Company's dredge *Cynthia* removed 38·7 cubic yards of class A material, and 12,-901·3 cubic yards, scow measurement, of class B. The cost of the work was as follows:—

| | |
|---|---|
| 38·7 cubic yards, class A material at $6.90 | = $ 267 03 |
| 12,901·3 cubic yards, class B material at 49½ cents | = 6,386 14 |
| Total | $6,653 17 |

Owing to the fact that the material contains a large number of boulders, considerable difficulty was met with, these boulders rolling loose from the clay, and the dredge being incapable of picking them up. An attempt was made by the Maritime Dredging and Construction Company to raise the boulders with the stone lifter, but this also was only partially successful. At the present time, according to reports from a diver employed on this work, a number of boulders remain. These are also found by sweeping the area in question.

*Germain Street Slip.*

At the request of the city of St. John, dredging was undertaken in Germain street slip for the purpose of improving the high water berth beside the wharf of Mr. George

Dick, coal merchant. On October 21, 1914, an authorization was received to accept the Maritime Dredging and Construction Company's offer of 75 cents per cubic yard, scow measurement, for the removal of 1,000 cubic yards, place measurement, since no one could be found to undertake the work on a place measurement basis.

The total work consisted in dredging a berth 180 feet long and 60 feet wide to a sloping grade from 7 feet above low water at the outer end, to 12 feet above low water at the head.

From November 17 to December 2, 1914, the Maritime Dredging and Construction Company's dredge *Beacon Bar* removed a total quantity of 909·1 cubic yards, scow measurement, or 660 cubic yards, place measurement, of mud, gravel and timber. The cost of the work was as follows:—

909·1 cubic yards, class B, at 75 cents = $681.83.

*Main Channel.*

The main channel of St. John harbour has a total length of 4,500 feet, being 600 feet wide for 1,800 feet, and widening gradually to 1,000 feet in the remainder of its length. The departmental dredge *Fielding* has carried on improvements in the channel since 1908. The work consists of dredging this channel from a minimum depth of 19 feet at low water to a depth of 32 feet at low water, and the maintenance of this depth.

With the exception of a small area at the point of the foul ground, where ledge rock enters the channel at a depth of 27 feet below low water, the whole channel had been, previous to 1914-15, dredged to a depth of 30 feet. During 1913, however, a large bar formed across the channel, approximately 2,000 feet long, allowing a depth of but from 24 to 27 feet below low water. The bar consisted of very fine sand.

During a portion of 1914-15, owing to the fact that the available scows would not hold the material, it was necessary for the dredge to deposit into her own hoppers and steam to sea to dump. Later, however, satisfactory scows were obtained, and were used for carrying away the dredged material. One cut, half a mile long and 200 feet wide, was made during the dredging season. No appreciable amount of filling has occurred in the channel during the past year.

During 1914-15, the *Fielding* removed 209,122 cubic yards, scow measurement, of sand and mud, between June 22, 1914, and January 16, 1915.

*Nelson Slip and Navy Island Bar.*

On September 3, 1913, a contract was entered into with the Maritime Dredging and Construction Company, Limited, for the removal of 74,500 cubic yards, place measurement, class B material, at 34½ cents per cubic yard, from Nelson and Wellington slips, and Navy Island bar, on the west side of the harbour. This dredging was undertaken at the request of the Commissioner of Harbours, etc., of the city of St. John. The object of the work was to improve Nelson and Wellington slips for the better accommodation of schooners, the straightening of the ferry route across the harbour, and increasing harbour accommodation by removing the foot of Navy Island bar, to a depth of 11 feet below low water. The required grade in Nelson slip varied from 5 to 10 feet above low water. The dredging in Wellington slip was abandoned at the request of the city of St. John. During 1913-14, the place measurement quantity removed from Nelson slip and Navy Island bar, above the required sub-grade, was 40,087 cubic yards.

During 1914-15, the dredging at Nelson slip and Navy Island bar was completed to the required grades. The Maritime Dredging and Construction Company's dredge *Beacon Bar* removed a total quantity of 9,774·3 cubic yards, barge measurement, or

8,751 cubic yards, place measurement, of sand, mud and clay. The cost of the dredging during 1914-15 was as follows:—

8,751 cubic yards class B at 34½ cents.. .. .. .

SOUTH MARKET WHARF.

At the request of the city of St. John, dredging was undertaken at the face of South Market wharf, so that tug boats might have a sufficient depth of water to fasten there. The work to be done consisted in dredging to a depth of 10 feet below low water, necessitating the removal of 812 cubic yards, place measurement, of class B material. Prices on this work were requested, and on June 16, 1914, an authorization was received to accept the Maritime Dredging and Construction Company's offer of 47 cents per cubic yard, place measurement.

From June 26 to July 6, 1914, the Maritime Dredging and Construction Company's dredge *Beacon Bar* removed 1,049·3 cubic yards, barge measurement, of mud. It was found, however, that a portion of this material had been removed outside the authorized limits. The soundings showed that only 545 cubic yards, place measurement, had been removed from the allowed area, for which the contractors were paid. The cost of the work was as follows:—

545 cubic yards, place measurement, class B, at 47 cents.. $256 15

PARTRIDGE ISLAND.

Partridge Island is the quarantine and lighthouse station at the entrance of St. John harbour. In 1905-06, a 6-inch wrought iron pipe was placed across the west channel of St. John harbour, from Port Dufferin to Partridge island, to supply the buildings on the island with fresh water. This pipe was damaged and repaired several times, and later had to be abandoned.

In 1913-14, a contract was let for the supply and delivery of 3,300 lineal feet of new pipe, consisting of flexible, copper tubing, 4 inches in diameter. A length of 1,486·9 lineal feet of this tubing and couplings was laid in a dredged trench, beginning at the island side of the channel, during September and October, 1913.

During 1914-15, the dredging of the trench for the pipe was completed by the removal of 3,917·2 cubic yards of sand, mud, clay and stones and the balance of the pipe and couplings laid. A new section of pipe had to be placed beneath Port Dufferin breastwork, and repairs had to be made to five hydrants and some pipe on the island. A most satisfactory, continuous supply of water has been given on the island since September 23, 1914. Three million four hundred thousand gallons of water have been supplied averaging approximately 100 gallons per day, per man, since October 1. During this time the island has been used as a training station for soldiers, from 150 to 400 men being stationed there.

Work of dredging was begun August 26 and completed September 14, 1914, laying pipe,—begun August 24 and completed September 16, 1914, and repairs to pipe on island,—completed November 12, 1914.

Expenditure for fiscal year 1914-15, was $4,604.92.

*Wharf.*

The departmental wharf consisting of two wings of close-faced cribwork, 120 and 160 feet long, respectively, with stone filling between, was built in 1910, for quarantine purposes.

During 1914-15, materials were purchased and repairs were made to the low water landing. Six posts to support the protection for the low water landing, were erected, braced, capped and securely bolted in place; a railing was replaced and a new set of steps from the low water landing to the wharf were constructed.

Work was carried on during November, 1914, and January, 1915.

Expenditure for fiscal year 1914-15 was $125.12.

ST. LOUIS OR LOWER ST. LOUIS RIVER.

The St. Louis river enters the Northumberland strait about 7 miles north of Richibucto.

Inside the entrance is a wide lagoon generally shallow except in the winding river channel.

Dredging has been carried on in the last three years to obtain a cut 40 feet wide with 3 feet at low water ordinary spring tides across the flats to give a direct channel for the fishing boats from the entrance to the river proper.

In 1912, the cut was dredged for 1,200 feet by contract and in 1913, it was extended about 1,250 feet by day labour.

Work was in progress by day labour between July 27 and September 11, 1914, with a small orange peel dredge, the *St. Louis Star,* which was hired for $13 per day including the wages of engineer, gasoline and oil, when the new channel was extended 2,025 feet with depths of 2 to 3 feet at low water.

The material removed, mud and sand, amounted to 4,841 cubic yards, barge measurement, and the cost was 21 cents per cubic yard.

An extension of about 500 feet is necessary to reach the full depth at the inner end and a few shoal spots require removal over the dredged area. The cut ranges with the entrance lights of St. Louis Gully except on the inner 500 feet the course of which is in line with the up river channel.

The expenditure for the fiscal year was $1.005.42.

SACKVILLE.

*Old Public Wharf.*

Sackville, Westmorland county, is a thriving town of 1,380 inhabitants and a station on the Intercolonial railway at the Junction with the New Brunswick and Prince Edward Island railway lately purchased by the government. It lies on the Tantramar river and near the head of Cumberland bay.

The repair and extension of the old public or municipal wharf, begun in 1913, was continued between June 2 and August 8 and September 7 and November 10, 1914, when the new cribwork face was completed and the interior was levelled off and filled with clay from the adjoining river bank and with earth and broken stones. The cribwork face is 14½ feet wide on top and is covered with plank for that width. It is 122·7 feet long including a 12-foot extension to tie in with the adjoining New Brunswick and Prince Edward Island railway wharf. The outside face is sheathed with 4-inch plank.

The expenditure for the fiscal year was $2,088.56.

SEAL COVE.

Seal Cove, Charlotte county, is situated on Grand Manan island, about 62 miles southwest of St. John as the crow flies, and is one of the most prosperous fishing villages in the Maritime Provinces. In 1909-10, the department built a breakwater on the western side of the harbour of Seal Cove, 448 feet long, and from 24 to 37 feet wide.

On February 25, 1914, a contract was let for the construction of a breakwater pier on the eastern side of the harbour, the work to consist of round cribwork, 515 feet long, 24 feet wide on top for 203 feet and 30 feet wide on top for 312 feet, measured on the centre line. The work was commenced on May 1, and by October 16, 1914, was satisfactorily completed.

Expenditure for fiscal year, 1914-15, was $23,031.

SHEDIAC.

Shediac, Westmorland county, a town of 1,442 inhabitants, lies on the Northumberland strait, 20 miles south of Buctouche and 2 miles southwest of Pointe du Chêne. It is a centre for a large farming and fishing district and a popular summer resort.

The Shediac public wharf was built between October 19, 1910, and July 4, 1912.

During the fiscal year 1914-15, small repairs were made, consisting of renewing broken and worn planks in the covering, replacing and rebolting creosoted sheathing where it had become loosened or carried away and placing extra timbers to strengthen the bulkheads which close the outer spans.

The expenditure for the fiscal year was $42.05.

SHEDIAC ISLAND.

Shediac island, in Shediac harbour, is about 2 miles long and 1 mile in extreme width.

On February 19, 1914, a contract was entered into with Mr. Warren Taylor for the construction of a wharf at the northwest point of the island, about 1¼ miles from the Grandigue and 3½ from the Shediac wharfs on the mainland.

The contract price was $6,432, less $390, the cost of 6,000 feet, b.m. of creosoted timber supplied by the department for the work.

Work was begun on March 10 and the wharf, which is 712 feet long, was completed on August 8. It consists of a stone approach 15 feet long by 15 wide, a shore block 87·7 by 15 feet, fourteen blocks averaging about 22 feet long and 15 wide, fifteen spans of about 18½ feet and a pier-head 30·6 by 31 feet. A landing slip was built in the pier-head and the pier-head and 14th block were sheathed all around with 4- and 6-inch creosoted plank.

As an extra under the contract, the three outer spans were closed with extra stringers, sheet-piled on each side with 4-inch creosoted plank at a cost of $100.

The expenditure for the fiscal year was $3,351.07, including $326.50 for inspection and $48.57 for labour and freight paid in connection with delivering the creosoted timber used for the extra work.

SHIPPIGAN.

Shippigan, Gloucester county, is a village and settlement on the mainland at the north-east point of New Brunswick and opposite Shippigan island. A public wharf was constructed here in 1906 and 1907 at the terminus of the Caraquet railway.

Between 1st and 25th August and between 13th October and 28th November, 1914, a strip of 2-inch plank 15 feet wide was laid over the old worn covering of the approach for a length of 840 feet and on the pier-head 76½ feet long and 30 wide, and 122 piles were driven to close-pile sections of the outer part of the wharf to permit of dredging in the berths.

The expenditure for the fiscal year was $1,693.98.

*Ferry Landing at Public Wharf.*

During June, 1914, the ferry landing and protecting pier begun in 1913, at the east side of Shippigan public wharf was completed by bolting the fenders and sheathing between high and low water and placing 25 cubic yards of ballast in the work.

The work consists of a section, 50 feet long and 6 to 42 feet wide, level with the main wharf at the inner end and sloping down to about low water level in the outer 24 feet, beyond which is a guard pier 25 by 12 feet. It is built of cribwork sheathed on the sides with 4-inch plank.

The expenditure for the fiscal year was $107.95.

SHIPPIGAN GULLY.

Shippigan gully, a passage between Shippigan island and the mainland, much used by fishing and other vessels in passing from Baie des Chaleurs to the Gulf of St. Lawrence, is situated 56 miles east of Bathurst, the shire-town of the County of Gloucester, and three miles from Shippigan, the terminus of the Caraquet railway.

Works were begun in 1875 to improve the channel at the gully in which there was then a least depth of only 3¼ feet at low water. The construction of dams and breakwaters, concentrating the current in one channel, increased the depth to nearly 6½ feet in 1898 and to about 8 feet at low water or 13·8 feet at high water spring tides in 1903-4.

Between 1st June and 31st October, 1914, the rebuilding of the western breakwater was in progress in continuation of the work of the previous season.

The work extended over 228 feet of the breakwater, beginning on the north side 672 feet from the inner end beyond which main piles were driven outside the old face; the two walings were bolted to these piles; and close-piles were driven outside them for a length of 228 feet. Opposite this section, the same work was done on the outside of the breakwater for a length of 105 feet. The interior was partly filled with brush and stone and new cross-ties, stringers and covering were placed. Four hundred and thirty-nine close-piles and 59 main-piles were driven.

The expenditure for the fiscal year was $4,498.65.

STARKEY'S.

Starkey's is situated on the western shore of Washademoak river, 2 miles below its source, at Cole's island.

Dredging was for the purpose of removing all material to a depth of 9 feet below low water to afford a good berth for the arrival and departure of boats.

The total area dredged was 8,000 square feet.

The material removed was mud and clay.

1,737·5 yards, scow measurement, were removed, less 169 yards for overdredging.

The contract rate of payment was 22½ cents, the amount due contractors being $390.94, less $38.02 for overdredging.

This dredging was under contract with the St. John River Dredging and Construction Company.

The dredge *Tatanwanta* commenced work on August 31, completing on September 2.

STONEHAVEN.

Stonehaven, Gloucester county, is situated on the south side of the Baie des Chaleurs, 18 miles east of Bathurst.

The breakwater, originally 425 feet long and built by private parties, was acquired by the department in 1878.

Repairs were in progress between June 22 and July 27, and between August 27 and September 2, and on September 9 to 11, 14 to 16, and 21 to 23, 1914.

The work done consisted of rebuilding the part of the small block, built outside the northeast corner of the pier-head in 1910-11 to retain the stone slope running either way along the outside face of the breakwater, which had been destroyed by a storm for lengths of 17 feet along the corner and 15 feet along the approach. The crib, which was 5 feet wide on top, 11 high and 15 feet wide on bottom, was washed ashore twice during its construction. Several fenders were replaced on the end block and 115 cubic yards of large granite rocks were placed over the outside of the pier-head and approach.

The expenditure for the fiscal year was $982.59.

CHAMBERLAIN'S ROAD.

During the fiscal year 1914-15, the small landing wharf for fishing boats, begun in the previous year, at the foot of Chamberlain's road, so-called, about one-half mile west of the Stonehaven breakwater, was completed.

Work was in progress between July 1 and 25, August 20 and 31, and September 21 and 23, when 30 cubic yards of ballast was placed in the approach, 75 feet by 10, on which the covering and cap was then laid. The cap was also placed on the outer side of the pier-head and the whole work was sheathed with 3-inch spruce plank. A cribwork approach to the beach, 54 feet long and 12 wide, sloping in the outer 36 feet from the height of the wharf to the level of the beach, was built; the roadway was repaired by raising a cribwork retaining wall from 1 to 6 tiers and grading the surface with gravel from the bank in a length of 100 feet; an extension of the wall from 4 to 15 feet in height, 220 feet long, to the wharf to prevent a brook washing away the road, and the surface was levelled and graded in a length of about 250 feet.

The expenditure for the fiscal year was $596.44.

TABUSINTAC.

Tabusintac, Northumberland county, is a settlement on the Tabusintac river and about 32 miles northeast of Chatham.

The Provincial Government wharf projecting from the highway bridge, about 5 miles above the river mouth, was transferred to the Federal Department of Public Works during the fiscal year 1914-15, and between September 4 and November 5, 1914, the wharf originally 28 by 22½ feet was raised and levelled with new stringers and covering and enlarged to 55 by 41 to 43 feet with, in addition, a triangular span 13½ by 20 feet to improve the approach from the highway bridge.

The enlargement consists of a pile block 13 by 22½ feet abutting on the old wharf and a second pile block 43 by 16 feet separated from the former and the old wharf by a span of 16·2 feet. The blocks and old wharf are sheathed on the outer faces with 3-inch hardwood plank. A slipway was built in the front face of the enlargement.

The expenditure for the fiscal year and the total to date was $1,606.02.

THE RANGE.

The Range is situated at the extreme upper end of Grand lake opposite the mouth of the Salmon river.

Dredging was performed for the purpose of enabling the Grand lake steamers making this a point of call to use the high water wharf until the spring freshet falls and the low water wharf can be used.

The area dredged amounted to 17,700 square feet.

The material removed was gravel, mud and lumber edgings.

The total excavation, including removal outside ranges and overdepth amounted to 3,131 yards, place measurement, the equivalent scow measurement being 3,398·3 yards. The expansion factor was 8·5 per cent.

The contract rate of payment was 30 cents per cubic yard, place measurement, the contractors, the St. John River Dredging and Construction Co., being entitled to receive payment for the removal of 1,753 cubic yards, amounting to $525.90.

The dredge *Tantawanta* commenced work on June 24 and completed on the 29th.

THOMAS CREEK.

Thomas Creek, St. John county, is situated about 8 miles from St. John city and about one mile from Mispec, and is the home of about twenty-five fishermen. During 1913-14, the department built a beach protection consisting of 150 lineal feet of cribwork, 11 feet wide and 8 feet high. A second wall, 66 feet long, 18 feet wide and 11 feet high, was built and filled with ballast.

During 1914-15, three tiers of timber and twenty-eight fenders were placed on the beach protection built last fiscal year; one hundred and seventy-five cubic yards of ballast were placed in the work; a portion of the beach protection, 64 feet long, was raised two feet in height, to make up for settlement, and a portion of the ballast was replaced.

Work was carried on during part of the months of August, September and December, 1914.

Expenditure for fiscal year, 1914-15, $470.31.

### UPPER DERBY.

Upper Derby, Northumberland county, is a farming district on the north side of the Southwest Miramichi river about 10 miles above Newcastle.

Between 17th and 27th August, 1914, work was in progress in grading a roadway about 1,000 feet long from the highway to the wharf constructed in the previous year. The first 800 feet was turnpiked with the road machine and the remainder which was a steep slope from the top of the bank to the wharf was graded by hand labour. The roadway was continued with a sloping embankment past the inner end of the wharf to form an approach to the shore.

The expenditure for the fiscal year was $117.45.

### UPPER SALMON RIVER.

Upper Salmon River, otherwise called Alma, Albert county, is situated 6 miles from Andersons' Hollow, and 2 miles from Herring Cove. The people of the place depend entirely on the lumbering industry for a living, and a total of five million feet of manufactured lumber is shipped annually. At Upper Salmon River, the department has built, on three separate occasions, on the west side of the river mouth, three piers, 30 feet wide on top, respectively 180, 240 and 104 feet in mean length, each being an extension of the other. In 1912, an eastern breakwater, 150 feet long and 20 feet wide, was built by the department.

On the 5th of November, 1913, a contract was let in the sum of $9,989 for the construction of an extension to the present eastern breakwater. The work is to consist of round cribwork 46 feet long and 20 feet wide on top with a pier-head or ell, 100 feet long and 24 feet wide on top. The contractors, the Island Dredging and Construction Company, Limited, did not begin work during the fiscal year 1914-15, and have been granted an extension of one year from October 21, 1914, on their contract.

### WEBSTER'S.

Webster's is situated in Belyea's cove on the eastern shore of Washademoak lake about four miles from the St. John river, and is a point of call for the steamer on the St. John-Washademoak route.

Dredging was for the purpose of excavating a basin in front of the wharf, making it easily accessible for the arrival and departure of boats.

The area dredged was approximately 67,500 square feet, to a depth of 9 feet below low water.

The material removed consisted of hardpan.

The quantity removed was 6,771·1 cubic yards, scow measurement.

The rate of payment was 28 cents, the total amount due the contractors, the New Brunswick Construction Company, being $1,895.91.

The work was performed by the dredge *Tantawanta* which commenced on September 28 and finished on October 17.

WELCHPOOL.

Welchpool, a fishing village of 600 inhabitants, is situated on Campobello island, forming part of the County of Charlotte, 50 miles southwest of St. John, in a direct line, and 14 miles south of St. Andrews. The departmental wharf at Welchpool, built in 1909, consists of round cribwork, 279 feet in total length.

During 1914-15, the covering of the wharf was repaired with 400 feet, b.m., of 3-inch spruce plank; wire netting was placed on the surface of the steps and landings, in order to keep them from becoming too slippery and the gearing of the slip was repaired.

Work was carried on during August, 1914.

Expenditure for fiscal year 1914-15, was $41.91.

WELSH'S COVE.

Welsh's Cove, Charlotte county, is an inlet off Mace's Bay, 7½ miles from Lepreau Station, the nearest railway point; 2 miles from Dipper Harbour, by land, and 25 miles west of St. John. A large amount of fishing is done from this place.

On December 15, 1913, a contract was let for the construction of a breakwater, to provide shelter for the boats of the fishermen. The work was built during the fiscal year 1914-15, and consists of round cribwork, filled with ballast, 300 feet long and 30 feet wide on top.

To keep waves from washing over the breakwater and filling the boats lying inside, a break was constructed, as an extra to the contract, along the seaward side of the work. The break consists of five tiers of 10 by 10 timber, 300 feet in length, supported with framed braces.

Work was begun July 31, and completed December 12, 1914.

Expenditure for the fiscal year 1914-15 was $13,315.49.

WEST QUACO.

West Quaco, St. John county, is included in the town of St. Martin's, two miles distant. St. Martin's is situated 34 miles east of St. John, and is the terminus of a branch railway. The dam at West Quaco ,built in 1892, became dilapidated and had to be reconstructed. A new dam of cribwork, 200 feet long, 12 feet wide on top with an average height of 7 feet, was built in 1913-14.

To prevent a flow of water, which had scoured a channel around the outer end of the dam, during 1914-15, repairs were made by driving a row of piles for 115 feet in extension of the work to the bank. These piles were planked and brush and ballast for a depth of 5 feet were placed on each side.

A small wharf, 48 by 20 feet, utilized by fishermen at this place, was repaired by re-building a ramp 30 feet long and 14 feet wide, sloping from the wharf to the beach. This ramp is utilized in pulling up fishing boats to the top of the wharf for protection from heavy seas.

Expenditure for fiscal year 1914-15 was $712.35.

WHITE'S BLUFF.

On January 27, 1914, Messrs. Fox & Hamilton commenced work on a low water wharf at White's Bluff, Kings county, to be constructed at a cost of $11,985. On August 25, this wharf was authorized to be changed from a low water wharf to a graded one, at an extra expenditure of $4,308.90.

The wharf is 393¼ feet long with a width of 75⅜ feet at the face and return head 50 feet, and was completed on February 15, 1915, at a cost of $16,237.90, the expenditure for the fiscal year 1914-15 being $14,873.22.

WHITE'S COVE.

White's cove is situated on the south shore of Grand lake, about 7 miles from its entrance.

Dredging was performed to afford sufficient depth for the passenger boat which makes this a point of call.

The dredging provides a berth at the face of the low water wharf with a depth of 9 feet at low water.

The material removed consisted of clay and loose rock.

Dredging was commenced here in 1913, by the *Tantawanta*, of the St. John River Dredging & Construction Co., on August 14, and was suspended on August 16 after the removal of 836·8 yards, place measurement, a total cost $250.86 at 30 cents per cubic yard.

Work was recommenced in 1914, by the *Tantawanta*, on July 7, and completed on July 22; the removal for this season being 2,188·8 yards, place measurement.

The contract rate of payment was 30 cents per yard, place measurement, the contractors being entitled to receive payment for the removal of 3,025 yards, place measurement, for the whole work, amounting to $907.50. The expenditure for 1914 was $666.64.

The total excavation including removal outside ranges, etc., was 3,293 yards, place measurement, the equivalent scow measurement being 4,630·6 yards; the expansion factor from place to scow measurement was 41 per cent.

Dredging was under contract with the St. John River Dredging & Construction Company.

WILSON'S BEACH.

Wilson's Beach is a fishing settlement, situated in a small cove on the west side of Campobello island, part of the County of Charlotte, 50 miles southwest of St. John in a direct line, and 14 miles south of St. Andrews. The breakwater-wharf at Wilson's beach is 475 feet long, varying from 15 to 25 feet in width, with a depth of 13 feet at low water at the head.

During 1914-15, the cap, covering, stringers and two tiers of timber were renewed for a distance of 260 feet, and the wharf was widened by 8 feet for a length of 60 feet; a few pieces of covering were replaced on the balance of the work; six fender-piles were placed at the two outer corners of the work; wire netting, on the steps, and a light railing along the low water landing and steps.

Work was begun October 7, and completed November 21, 1914.

Expenditure for fiscal year, 1914-15, was $1,261.03.

WOODBURY'S COVE.

Woodbury's Cove, Charlotte county, is situated at the head of L'Etang harbour, on the eastern side, and three miles from St. George, the nearest railway point. The people of the place are engaged in farming and lumbering. During 1913-14, materials were purchased for the construction of a wharf.

During 1914-15, a pile wharf, 91 feet long and 65·8 feet wide, was satisfactorily constructed. The top of the work was painted with carbolineum.

Work was begun, 11th August, and completed, September 24, 1914.

Expenditure for fiscal year, 1914-15, was $1,078.16.

WOODWARD'S COVE.

Woodward's Cove is a prosperous fishing station on the eastern side of Grand Manan Island, Charlotte county, and is 6 miles south of North Head.

A contract was let on April 19, 1914, for the construction of a breakwater, to provide protection for fishing boats. The work consists of round cribwork, 300 feet long and 24 feet wide on top. The construction of the breakwater was begun on June 4, and by October 6, 1914, was completed.

Expenditure for fiscal year, 1914-15, was $12,291.

YOUNG'S COVE.

Young's Cove is situated on the south side of Grand lake about 16 miles from the entrance.

Dredging was for the purpose of affording a good berth for the passenger and freight boat which makes this a point of call.

Dredging was commenced here in 1913, by the St. John River Dredging and Construction Co., on August 16, and was suspended on August 27, after the removal of 1,926·6 yards, place measurement, at an expenditure of $577.98.

Dredging was recommenced in 1914, the material removed being clay and loose rock.

The total yardage removed, including overdepth and removal outside ranges, was 3,708 yards, place measurement, the equivalent scow measurement being 4,494·6 yards. The expansion factor from place to scow is 21 per cent.

The contract rate of payment was 30 cents per yard, place measurement. The contractors are entitled to receive payment for the removal of 2,899 yards, place measurement, amounting to $869.70 for the two years. The removal for 1914 was 972·4 yards, the expenditure being $291.72.

Dredging was under contract with the St. John River Dredging and Construction Company.

The dredge *Tantawanta* worked here in 1914 from June 30 to July 6.

## PROVINCE OF QUEBEC.

AMHERST.

Amherst Harbour is situated at the east end of Amherst island, the largest of the Magdalen islands forming the southwestern coast of Plaisance bay and southwestern division of the group; population, 7,000. The shipping of the whole group amounts to about a million dollars per year. The information gathered from the collector of customs, from merchants and other good authorities, would give the exports varying from $400,000 to $800,000, and the imports varying from $300,000 to $600,000, of which fully one-half would be shipping from the southwestern division. The work is of a public nature as it will benefit not only the islands but all vessels and fishing craft plying on the Gulf of St. Lawrence. The object of this work is to provide a safe inside harbour with depth of 16 feet at low water spring and giving a depth of 16 feet at H.W. neap in channel.

Two portions will need to be dredged, viz.: an inside portion of a superficial area of 312,500 square feet with a mean depth of sand to be removed of 10·8, giving 125,000 cubic yards, and an outside portion of a superficial area of 162,000 with a mean depth of material to be removed of 6 feet, giving 36,000 cubic yards, of which 1,500 yards is a ledge of solid rock, blasted and broken up last winter. All of the above material will have to be towed some 2 miles out. The cost (30 cents per cubic yard) will be $48,300. The area to be dredged, especially in portion outside, will be exposed to easterly and northeasterly winds.

During the summer 1914, 84,368 cubic yards, of which 5,000 was cast over, were removed by departmental dredge *No. 4*.

The dredging should, as in the past, be done by departmental dredge on account of having to do the work to suit local exigencies.

The first thing in the spring, at opening of navigation, the 1,500 cubic yards of rock blasted should be removed with some 3,500 cubic yards of sand left this fall on and immediately around the ledge of rock to be removed, and the channel in remainder of outside portion should be cleaned to allow the fleet of schooners that come from all directions in the spring for fish and bait at Amherst harbour to enter safely.

Then the dredge could proceed to Grande Entrée to remove some 30,000 cubic yards at entrance of harbour and return to Amherst to dredge the inside portion.

*Pier.*

During the last fiscal year, the superstructure of the training pier of 700 cubic yards of cribwork was completed, a large quantity of ballast was taken out for future use and materials for construction bought.

Expenditure, $4,486.33.

ANSE À BEAUFILS.

Anse à Beaufils, in the municipality of Cape Cove, county of Gaspé, is situated on the Gulf of St. Lawrence, 6 miles south of Percé.

From 1898 to 1901, protection works, on each side of the channel leading to the inner basin, were built, consisting of two training piers, each about 440 feet long.

The breakwater at the entrance of harbour had to be sheathed on the outside face from bottom up and reballasted, the inside harbour dredged out and the banks protected by a breastwork protection for a total length of 1,200 feet. This breastwork is constructed so as to afford good landing facilities for all fishing boats from Cape Cove to Percé.

Expenditure, $2,940.97.

ANSE A GILLES.

L'Anse a Gilles is a post village in the county of L'Islet, on the south shore of the St. Lawrence, about 45 miles below Quebec.

Spring tides rise 21 feet; neaps, 13 feet.

The wharf was vested to the Crown in 1904 and underwent some repairs at that time. It was built with small isolated piers connected with platforms; near the outer end, the piers being too light and liable to be displaced by the ice, it was found expedient to tear down a length of 87 feet and rebuild it with continuous cribwork and no openings.

The width of the wharf, for a length of 72 feet is 12 feet, and 24 feet for a length of 15 feet, the mean height being 15 feet. The construction is light open-faced cribwork filled with stone and sheathed on both sides with spruce deals 3 inches thick.

Work of reconstruction was commenced on 6th July and was closed on 31st August. The total expenditure was $1,500.

ANSE A L'ISLOT.

Anse a L'Islot is a small harbour, seven miles east of Newport, protected from northerly and easterly winds by the main coast and from southwest gales by a small island, being thus open only to southerly gales. It was decided to build a landing pier running from the main shore towards the outside end of the island in a southwesterly direction, answering both as a landing pier and as a breakwater, against southerly gales.

During the course of last summer, the approach leading to pier was protected by a breastwork of timber backed with stone ballast for a length of 800 feet, at a cost of $500.

ANSE AU GRIFFON.

Anse au Griffon is 17 miles northwest of Gaspe Cape. The mouth of the river having been choked and closed up by a gravel bar thrown in by northeasterly gales, the river overflowed the flats and parts of the village, causing a good deal of damage to properties and the fishing industry.

The channel was cleaned of obstructions that had gathered which in places had partly closed it, and on the shore end of both training piers had to be reballasted and the left hand side pier repaired for a length of 150 feet.

Expenditure, $800.58.

ANSE ST. JEAN.

Anse St. Jean, Chicoutimi county, is situated on the south shore of River Saguenay, some 18 miles from its mouth, it is a calling place for the Canada Steamship Company. Population, about 1,500.

During the present fiscal year, the flooring of the wharf on a length of 83 feet by 20 feet in width has been renewed, stringers and the first tier of ties have also been renewed, on the west side of the wharf, four courses of face-timbers have been renewed on a distance of 44 feet, the approach has been entirely renewed on a length of 125 feet, a new guard, 100 feet long, has been placed on the northeast corner and the freight shed and waiting room have been repaired and painted with three coats of paint.

Work was done by day labour and was started June 24; completed September 30.

Amount expended, $1,999.67.

During the present fiscal year, the sum of $2,499.68 has been expended to purchase materials in contemplation of the construction of an extension to the present wharf.

AYLMER.

Aylmer, a village in Wright county, is located in the north shore of Lake Deschanes, about nine miles above Ottawa.

Minor repairs were made to the flooring of wharf approach in October. Some 250 feet, b.m., 3-inch plank were placed.

Expenditure to March 31, $10.

BAIE DES ROCHERS.

Baie des Rochers is situate on the north shore of the River St. Lawrence, in the county of Charlevoix, about 15 miles below Malbaie. Population, approximately 1,800.

The total area of flooring, 235 square yards in all, which was in a dangerous condition, was renewed. This involved the replacement of approximately 1,100 lineal feet of cross-ties, longitudinals ,face timbers and vertical posts. Three hundred lineal feet of coping were placed in position.

Work was done by day labour and the expenditure was $639.18.

BAIE ST. PAUL.

Baie St. Paul is situate in the County of Charlevoix, on the north shore of the River St. Lawrence, 64 miles below Quebec. Population, 4,000.

During the past season, two holes on the west side of the wharf and one on the east side which had been made by the ice were patched up; this work included the laying of vertical posts and of some 600 lineal feet of 12 by 12-inch face timber and necessitated the removal of stone to allow the repairs being effected and for the subsequent refilling. Two hundred square yards of 5-inch hardwood sheathing were used on the western face. An old unused slip on the east side of the wharf was refilled; this work involved the building of approximately 100 cubic yards of cribwork filled with stone and the tying of same to the old structure. The slip hoist structure was remade and levelled to allow of better operation and was painted together with the freight and passenger building, copings and mooring posts. The sand slope at the approach of the wharf which was in a bad state was cleaned of dangerous boulders and the approach put in good condition.

Work was done by day labour and the expenditure was $4,762.

BARACHOIS DE MALBAIE.

Barachois de Malbaie is a large parish and municipality situated at the head of Malbaie bay some 12 miles east of the county town Percé.

The plant and part of the materials necessary to build a breastwork protection were bought and after much delay through lack of railroad facilities to get plant and materials delivered, the work was started but had to be discontinued on account of heavy storms and cold weather.

The training pier on the south side of the outlet having been partly carried away for a length of 180 feet had to be reconstructed with sheet piling at a cost of $1,495.76.

The expenditure for plant, materials and preliminary work amounts to $3,199.22.

BATISCAN.

Batiscan, County of Champlain, is situated on the north shore of the River St. Lawrence, 60 miles above Quebec, and 21 miles below Trois-Rivieres. It is the centre of traffic for the surrounding district. The Royal mail steamers stop there twice daily.

The wharf built in 1864 had been purchased by the department in 1912, and it had been decided to build a concrete superstructure from the top, which corresponds to 12 feet above the zero of low water level, to the low water level, which work had been placed under contract to C. A. Gruninger and J. M. Dalton on August 31, 1913. The work was commenced on August 27, 1913, and is still under progress.

Expenditure for year 1914-15, is $15,199.96.

BATISCAN RIVER.

The Batiscan river takes its rise in the Laurentide mountain, flows through the counties of Quebec, Portneuf and Champlain and empties into the St. Lawrence river, 21 miles below Three-Rivers.

The object of the dredging is the maintenance of a 4-foot channel through sand bars in order to reach the new Government wharf at St. Genevieve de Batiscan, 6 miles above the outlet of the river.

At this wharf a basin was dredged with an area of 30,810 square feet, the total length of dredging being 1,027 lineal feet. Dredging was also performed at the 2nd, 3rd and 4th miles from the outlet; at the first site, the length of dredging was 576 feet and the area 17,280 square feet; at the second, the length 936 feet and the area 28,180 square feet and the third site 790 feet and 23,700 square feet.

This dredging is not completed and consists in cutting bars formed yearly at the vertex of the channel curves all along the river; the bottom being composed of pure

blue clay covered by a stratum of alluvial sand. Every spring, when the freshets are over, the cut is nearly filled in by the suspended material and detritus.

The following table show the quantity with place and situ measurements for the different sites where dredging was performed during the last season; from these quantities is derived the factor of expansion:—

*Dredging in 1914.*

| Site | Date. Month. | Scow Meas. | In Situ Meas. | Percent. |
|---|---|---|---|---|
| 2nd mile No. 3. | June | 3,124 | 2,778 | 14 |
| 3rd mile " 20. | " | 4,532 | 2,909 | 56 |
| 4th mile " 21. | July | 7,316 | 4,855 | 51 |
| Wharf 1. | June | 6,504 | 5,082 | 28 |

Two thousand two hundred and fifty-eight cubic yards of material were also removed at the site of the ferry at Batiscan; the total factor of expansion is 38 per cent. This work was done by agreement dated May 20, 1914, between the Department of Public Works, Canada, and F. C. Burns of Three Rivers, who removed 23,734 cubic yards of material at 15 cents, making a total expenditure of $3,560.10. The work was commenced on May 20, and discontinued on August 10, 1914.

The maintenance of a 5-foot channel on the Batiscan river was commenced in 1883, by the Federal Government, the result was so appreciable that navigation was practically uninterrupted since, while on another river emptying in the St. Lawrence one and a half mile below, known as the Ste. Anne river, flowing in the same direction, carrying in as much alluvium, the result was that its bed was raised, its sectional area reduced in height and enlarged so much that no navigation is now maintained on the first mile from the outlet. The dredging performed on the Batiscan river since 1883 may be summarized as follows:—

| | Cubic Yards. |
|---|---|
| 1883-84 | 7,333 |
| 1901 | 66,859 |
| 1902 | 81,384 |
| 1903 | 60,605 |
| 1905 | 4,080 |
| 1906 | 56,200 |
| 1907 | 38,345 |
| 1908 | 119,861 |
| 1909 | 33,321 |
| 1910 | 83,533 |
| 1911 | 35,739 |
| 1912 | 56,804 |
| 1914 | 23,734 |

BEAUPORT.

*Dredging.*

Beauport is situated in the County of Quebec, on the north shore of the River St. Lawrence, some 3 miles below Quebec. Population, 4,000.

In order to provide a channel for schooners carrying stone from Beauport quarries and for other traffic, it was decided to dredge over an area of approximately 235,000 square feet, a total quantity of 50,500 cubic yards of material.

A contract was entered into with the W. J. Poupore Company and work was started on July 2 and stopped on November 19. During the period, dredging was done over an area of approximately 131,000 square feet.

Thirty-five thousand six hundred and thirty-five cubic yards, scow measurement, of mud, sand and clay were excavated.

The contract price was 30 cents per cubic yard and the total amount paid the contractors, $6,970.80.

BECANCOUR.

Becancour, a parish and town in Nicolet county, on the Quebec, Montreal and Southern Railway, situated near the mouth of the Becancour river, six miles from Doucet's Landing on the St. Lawrence river and seven miles from Three Rivers. It contains one grist mill, two saw-mills, one carriage factory, five cheese and butter factories, two hotels, ten stores, one R. C. church, one convent, and has a large trade in hay, cheese, butter, flour and grain.

On October 24, 1910, the construction was begun by day labour of a small landing pier on the east bank of the east branch of River Becancour, some twelve hundred feet from its confluence with the St. Lawrence river. Work suspended October 31, resumed January 2, 1911, and completed February 28, 1911.

The wharf was one foot above low water, a close-faced crib head-block, 50 feet long outside face by 30 feet wide, resting partly on two rows of piles eight feet distant (the front one with two feet centre to centre, the other four feet centre to centre) and partly on the ground. The structure had eight feet of water along outer face and rose ten and a half feet above zero gauge. The space between head-block and top of bank was filled in with stone and earth. The total cost was $4,708.08.

In the spring of 1913, the wharf was damaged by the ice and repaired and sheathed during summer at a cost of $426.44.

In the spring of 1914, the bank of the river immediately above, underneath and along the wharf was eroded and the wharf collapsed and the freight shed tumbled over in the river.

On September 10, 1914, authority was received to remove the freight shed from the river on to the bank and build a small gangway to connect the wharf with the bank of the river, by day labour. Work was commenced on September 21, 1914, and carried on until September 26, 1914.

*Dredging.*

The object of the dredging was to make navigable this channel, which had been filled during the spring of 1914, in order to allow boats to reach the Government wharf.

Dredging was performed by dredge *St. Pierre*; work was commenced on August 3, and completed on September 7, 1914, and consisted in the removal of 17,814 cubic yards, scow measurement, and 1,794 cubic yards, place measurement, of cast-over; all the material removed being of class B: sand and clay.

Length of cut, 14,000 feet, width of cut at bottom, 50 feet, finished depth, 8 feet at extreme low water level or below zero of gauge at Three Rivers.

Expenditure, $3,563.20.

BELOEIL.

Beloeil, a post village in Vercheres county, on the Richelieu river, 1½ miles from Beloeil station. It contains 1 Catholic church, 3 window and sash factories, 3 cheese and butter factories, 1 branch bank (Eastern Townships) and 1 powder mill. Population 1,300.

On August 16, 1913, an Order in Council was passed granting authority to purchase from Mrs. Louis Comtois, for the sum of $1,400 an old wharf and land at Beloeil village, the said property being required in connection with the new wharf.

In March, 1914, timber, lumber and other materials were purchased, in view of the construction of the proposed wharf, at a cost of $4,262.25.

The new construction was started early in May, 1914, and consists of:—

(a) A crib head-block 100 feet long by 10 wide with wings at both ends 40 feet long by 10 wide, filled and packed with stone; the crib proper is covered with 3-inch pine plank.

(b) Earth and stone filling between the wings.

(c) A stone and earth approach of 200 feet long by 25 wide with a hand-laid stone riprap on the downstream side.

(d) A 6-inch macadam on the wharf, an approach filling.

(e) A freight shed and waiting room 30 feet long by 20 wide.

This work was performed by day labour at a cost of $4,367.98.

*Dredging.*

The object of this dredging was to provide easier landing for motor boats and row-boats.

During the summer of 1914, the department undertook two different dredging improvements within the limits of the village.

A.—OPPOSITE BELOEIL BRIDGE.

The latter is situated immediately upstream of the Dominion Government guide pier.

From June 10 to June 13, departmental dredge *No. 119* removed some 747 cubic yards scow measurement of clay in completing a 4-foot landing basin. Hours of actual dredging, 32½; cut, 22 feet wide; face, 1½ to 2½ feet; distance advanced, 400 feet; dumping grounds, ½ mile upstream on southwest side of river. Dimensions of work accomplished: 165 feet alongside shore by 30 feet wide.

B.—OPPOSITE CANADIAN EXPLOSIVES COMPANY PLANT.

The object of this dredging was to facilitate the loading of barges in front of the Canadian Explosives wharf.

The latter is situated some 1½ miles upstream of Grand Trunk railway bridge.

From October 21 to October 23, departmental dredge *No. 119,* removed some 464 cubic yards scow measurement of clay and sand in completing an eight-foot basin. Hours of actual dredging, 22; cut, 22 feet wide; face, 2 to 3 feet; distance advanced, 174; dumping grounds ½ mile upstream on southwest side of river. Dimensions of work accomplished was 1 cut 145 feet long along shore by 15 to 25 feet wide.

BELOEIL STATION.

Beloeil Station, part of Beloeil village, a post office in Vercheres county, with a station on the Grand Trunk railway, is situated on the Richelieu river, 21 miles northeast of Montreal. An elegant iron drawbridge, 1,200 feet long, crosses the Richelieu. It has an express office, 2 stores, 2 hotels, 1 saw-mill, 1 bank and works of the Hamilton Power Company.

*Guide Pier.*

In 1896-97, it was found that the guide piers on the west side of the river were in such bad condition that they could not be properly repaired and an entirely new line of guide works was adopted. It was decided to build a solid crib-work wall from the Grand Trunk railway pile abutment upward, following the line of a 15 degree curve, for a distance of 337 feet; this crib-work guide pier was completed in November, 1905.

In the months of July and August, 1914, urgent repairs were made to this guide pier consisting in the renewal of face timber, 4 feet high by 159 long with the necessary crossties to bind the bulk.

The work was performed by day labour at a total expenditure of $485.12.

*Booms.*

The Belœil booms, placed by the department in order to facilitate the passage of boats and barges through the G. T. railway swing bridge, over the Richelieu river, were repaired during the months of May and July last. One of these booms was entirely recovered with a new walk of 3-inch pine plank in order to bind it together and afford a good connection between two of the piers.

After the high waters had receded in July, a permanent waling was placed with strong supports and back braces, in the gap between the lower pier and the bridge foundation, this ensuring greater safety to boats going down the river.

These repairs and improvements were done by day labour at a cost of $241.67.

BERGERONNES.

Bergeronnes, Saguenay county, is situated on the river of the same name, four miles from the River St. Lawrence ,about 15 miles below Tadousac. There are post and telegraph offices, 5 saw-mills, 3 cheese factories.

Population, about 1,000.

The sum of $1,101.51 was expended during the year on repairs to the wharf.

The front of the wharf on a length of 96 feet was protected with pile sheathing, 21 piles have been driven to protect the approach of the wharf, the old wharf on the other side of the river has also been rebuilt on a length of 100 feet and filled in with earth.

Work started June 11, completed July 11, and was done by day labour.

*Dredging.*

On June 29, authority was given to have the departmental plant *Steam Derrick*, do some dredging at Bergeronnes, Saguenay county.

The object of the work was to allow schooners carrying lumber to keep afloat alongside the Government wharf.

The area dredged was 7,400 square feet, to a depth of 4 feet. The material was cast over to be used as filling for the wharves; some material had to be redredged.

The quantity removed was 222 cubic yards.

The dredge was at work from June 29 to July 25.

BERGERONNES RIVERS.

During the present fiscal year, a sum of $2,000 was expended in the removal of boulders at the mouth of the rivers.

Work started September 18; discontinued October 18, and was done by day labour.

BERSIMIS.

Bersimis, Saguenay county, is situated on the north shore of River St. Lawrence, some 56 miles below Tadousac, it is a post and telegraph village with an important saw-mill belonging to the St. Lawrence Lumber and Industrial Company. Population about 250.

At last session of parliament, a sum of $3,500 was voted towards the construction of a wharf, and during the present fiscal year the sum of $1,933.79 was expended in purchasing materials.

BERTHIER (EN BAS).

The village of Berthier in the County of Montmagny, is on the south shore of the St. Lawrence, 29 miles below Quebec. A large traffic in farm produce is carried on through the coasting steamer *Champion* which plies daily between Quebec and Berthier.

Spring tides rise 21 feet, neaps, 13 feet.

The repairs made to the wharf at Berthier (en bas) during the present fiscal year were the following:—

The face timbers on the west side, broken by a vessel standing near the wharf during a storm, were renewed on a length of 50 feet by a height of 3 feet.

The hardwood sheathing upon the outside and western faces, which was worn out was renewed with red birch 6 inches thick.

A fender 30 feet long, 12 inches square, was replaced; the flooring was renewed on a surface of 6,000 square feet, and most of the stringers and cap pieces were replaced on that surface.

The works were carried on during the months of September and October, with an expenditure of $1,499.65.

BIC.

Bic, on the south shore of the St. Lawrence river, in the County of Rimouski, is an important village and a favourite summer resort. The harbour offers a natural shelter to vessels of small draught.

Spring tide rises 14 feet; neap tide, 8·5 feet.

There are two wharves at Bic; one located on the south shore of the harbour, which is called the old wharf, and the Pointe à Cote wharf, located on the point of the same name.

The work done during the fiscal year 1914-15, consisted in the repairing of the approach to and in the renewal of the planking of the wharf.

Expenditure.. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. $2,014 64

BOUCHERVILLE.

Boucherville, an incorporated village in Chambly-Vercheres county, prettily situated on the south shore of the St. Lawrence and on the Quebec, Montreal and Southern railway, 9 miles from Montreal. It has a telephone service, 1 Roman Catholic church, 1 hotel, 4 stores, 1 grist mill, a large convent and commercial college and telegraph and express offices. Population of village, 943; of parish, 870. It is a favourite summer resort, the boat *Boucherville* of the Canada S. S. Lines, Ltd., makes several trips daily carrying passengers and freight to and from Montreal.

In order to prevent erosion, alongside Ste. Famille street, on the river shore, caused by waves produced by the wind and passage of steamboats in the channel, during the high water period, a protection wall was constructed. The work consists of a drystone handlaid wall 550 feet long, 12 feet mean height, 6 feet thick at base and 3 thick at top. The inside of the wall is filled in with earth to the level of the street.

The stone required for this construction was supplied by the municipality.

The work was performed by day labour at a cost of $1,280.25.

BRYANT'S LANDING.

Bryant's wharf, Brome county, is situated on the west side of Lake Memphremagog, 5½ miles by water and 8 miles by road from Magog, the nearest railroad station on the through line of the Canadian Pacific railway. Two steamers making daily round trips between Magog and Newport, Vt., call there from the beginning of May to

the end of September. During the time the boats are running, the wharf is used by the population for a distance of three miles in any direction as a means of transport for passengers and freight of all sorts up and down the lake.

At the last session of Parliament, the sum of $3,100 was voted for an extension to the wharf and June 13, 1914, authority was received to expend this amount by day labour.

Work was commenced September 15, and completed October 21, 1914, and consisted in building an extension 30 by 18 feet standing in 12 feet of water; the top of the wharf being 5 feet, 9 inches above low water. This extension was built on solid stone-filled crib, sheathed with three-inch spruce on the front and the south end. A concrete landing stage with two different levels was also constructed on the south side of the outer end of the approach; the space between this landing stage and the approach was filled with stone and graded with gravel on the top. During the fiscal year 1914-15, the expenditure was $3,088.90.

### BUCKINGHAM.

Buckingham is a town in the County of Labelle on the Riviere du Lievre. Population, 3,800. It has rail connection with the C. P. railway, and is the terminus for considerable boat traffic.

Minor repairs to doors of freight shed, consisting of replacing broken hinges, were made during the summer.

Expenditure to March 31, $4.30.

### CACOUNA.

Cacouna is situated on the south shore of the St. Lawrence, in the County of Temiscouata, 120 miles below Quebec. It is one of the best known and most frequented summer resorts of Canada.

Spring tides rise 19 feet; neaps, 12 feet.

The work done during the present fiscal year consisted of an extension to the wharf, 50 feet in length, 21 feet in height on a width of 30 feet on top. It is a close-faced stone-filled cribwork with a batter of 1 in 12 on the sides and outer end. It is substantially built with binding posts, screw bolted to the face timbers, placed every 20 feet and in both outside corners; the structure is filled with stone.

The cost of the above work was $3,909.

Repairs were made to the old wharf; the shore end on a length of 200 feet was paved with new spruce deals 3 inches thick, and new stringers and cap pieces were placed. Minor repairs were also made to the other parts of the wharf.

The works were carried on during the months of Sepetmber, October and November. The sum of $447.26 was expended for above repairs, making a total expenditure of $4,356.26.

### CACOUNA (EAST).

This locality is a part of the parish of Cacouna and is distant about 6 miles from the church. The chief trade of the place is sea moss and fish, consisting of salmon, herring and small fish.

As the beach did not present natural facilities for building a wharf, the site chosen was a small cove at the mouth of a creek where the bottom was lower than elsewhere, therefore giving more water at high tides with the least length of construction.

The landing pier consists of an open-faced cribwork, 100 feet in length, 19 feet in width on a height of 9 feet at the outer end, together with a stone approach 180 feet long, 5 feet high near the wharf and 19 feet in width.

A road leading from the highway to the wharf, about 400 feet long, was built and graded with gravel, and ditches were excavated on both sides. The location of the wharf is exactly opposite the church of Notre Dame des Sept Douleurs, and the wharf is likely to be used by the people of the island when landing at high tides.

The work was commenced on July 16, and completed November 15. The total expenditure was $1,999.05.

CANNES DE ROCHES.

Cannes de Roches is a small fishing cove 5 miles northwest from Percé and 2 miles from Corner of the Beach. All the fishermen from Corner of the Beach and from the falls of Percé seek shelter at Cannes de Roches in stormy weather. The breakwater, 175 feet long, built in 1907, was to be lengthened 90 feet on account of the number of boats to be sheltered.

During the last fiscal year, a crib of 40 by 22 feet built in 1911 to low water level but which had moved out of position, was built to coping at a cost of $2,043.

CAP-A-L'AIGLE.

Cap-a-l'Aigle is situated in the County of Charlevoix, on the north shore of the River St. Lawrence, about 86 miles below Quebec. Population, 1,200.

The new head-block to the wharf at Cap-a-l'Aigle has been completed this year. This block consists of a cribwork structure 153 by 33 feet at top and 38 feet high; the front of this crib resting for a length of 85 feet on a concrete wall backed with stone and for the remaining 68 feet on the natural bed of the river. The front and sides of the crib above low water line are covered with hardwood sheathing and further protected with hardwood fenders and carlings. This block is also supplied with steel ladders, mooring posts, mooring rings, movable slip and patent movable slip hoist.

Contractor, Napoleon Trudel. Expenditure for fiscal year, was $26,402.29.

*Old Wharf.*

During the past season, the flooring of the wharf which had sunk in places was renewed and levelled; 650 square yards of new flooring were laid involving the addition and replacement of over 2,200 lineal feet of cross-ties, floor stringers, longitudinals, face timbers and vertical posts. A new slip hoist was installed and minor repairs effected to the old shed.

Work was done by day labour and the expenditure was, $2,744.61.

CAP DE LA MADELEINE.

Cap de la Madeleine, County of Champlain, is a village on the north side of the St. Lawrence river, two miles below Trois-Rivieres.

An extension of 145 feet in front of the Government wharf built in 1887 has been erected with a southeastern face of 200 feet in length, and a northeastern face of 160 feet by contractor Charles Page, who entered into a contract with the Department under date March 3, 1913. The construction was started June 2, 1913, and is under progress.

Authority was given to place two steel plates and a stone rip-rap on the sloping surface of the old wharf.

The gross amount of work done and material delivered amount to, $62,658.95.

CAP SANTÉ.

Repairs were made to the wharf at Cap Santé, Portneuf county, during fiscal year 1914-15.

Slope on west side of pier on a length of 100 feet by 8 feet in height was completely renewed with 3-inch spruce deals receiving, when completed, two coats of hot coal tar; to better fit in and secure sheathing on reinforced stringers, the steel plate on upper and lower angles of slope was removed and replaced.

On east elevation of wharf, 3-inch spruce sheathing was placed on a length of 67 feet by average height of 17 feet; the same 3-inch spruce was placed on outer end elevation 70 feet by 19 feet high, also on the 12 feet width of outer end of slope, the whole secured with ¾-inch square 9 and 10 inch spikes.

The waiting room and freight shed were thoroughly overhauled, repaired and painted.

Flooring, posts, railings, etc., were renewed in whole or part as needed. 14,389 feet board measure of 3-inch spruce deals were used in repairs and all old iron spikes removed in effecting same, were worked at forge and replaced in work, requiring only 100 lbs. of new iron; other materials used were 21 kegs spikes and wire nails, 1 barrel coal tar and 18 gallons paint.

CHAMBORD.

Chambord, Chicoutimi county, is situated on the west side of Lake St. John, 40 miles below Roberval; it is a farming parish.

Population, 1,000.

During the fiscal year, the sum of $550 voted at last session of Parliament has been expended in repairs to the wharf.

The work consists in renewing the flooring on a length of 420 feet by 20 feet in width.

Work started August 24, completed September 14, and was done by day labour.

CHAMPLAIN.

Champlain, a post village in the County of Champlain, is situated on the northern shore of the River St. Lawrence and on the Canadian Pacific railway, 15 miles below Three Rivers.

In view of affording much needed water facilities to the traffic of Champlain and surrounding localities it was decided in 1904 to build a public wharf at that place. The work was started the same year, 230 concrete members were moulded and the whole superstructure was completed in 1905.

As the wharf and approach were filled in with sand and boulders, sand has partly washed out, which has caused the filling surface to lower 1½ feet approximately.

During the last year, a layer of macadam has been spread over the whole superstructure, by day labour and cost $742.73.

A shed 26 by 20 feet was erected on the wharf, commenced March 22 and completed the 30th of the same month. The total expenditure amounted to $398.72.

CHATEAU RICHER.

Chateau Richer is situated in the County of Montmorency, 15 miles below Quebec.

Population, 1,800.

An addition to the wharf, 40 feet long by 45 feet wide, containing approximately 1,350 cubic yards of cribwork filled with stone, was erected to provide more berthing space for schooners.

Hardwood fenders were put in front of the wharf to protect it against the ice. Some 250 feet of coping of the old wharf were renewed and a coat of paint applied to coping and mooring posts.

Work done by day labour and the expenditure to date is $4,917.51.

CHICOUTIMI BASIN.

Chicoutimi Basin is part of the town of Chicoutimi, where the ferry between Chicoutimi and Ste. Anne calls.

During the fiscal year, the sum of $97.69 was expended in the extension of the movable slip.

Work started June 15, completed June 20, and was done by day labour.

CHICOUTIMI.

Chicoutimi Town, Chicoutimi county, is situated on the south side of River Saguenay, at the head of navigation, 71 miles above Tadousac, it is the terminus of the Quebec and Lake St. John railway. The Canada Steamship Line Company maintain a daily service between Chicoutimi and Quebec. Population, 8,000.

During the fiscal year, the outside face of the wharf on a length of 150 feet was protected with piles driven 15 feet into the bottom, the east side on a length of 60 feet was protected with piles in contemplation of the construction of an extension, the freight shed has been enlarged 12 by 38 feet, an extension of 12 by 40 feet has been built, rain guard was built on the front and south sides of the shed, the old winches operating the movable slip were replaced by patent gear blocks, the movable slip has been repaired, a new light tower has been constructed, the flooring upon an area of 3,000 feet has been renewed, freight shed, blacksmith shop and carpenter shop, have been painted with three coats of paint, about 1,000 loads of gravel and earth have been carted on the wharf, the road leading to the wharf has been repaired, and planks between tracks have been placed.

The works started May 15, and was carried out by day labour. Amount expended, $4,995.70.

CLARKE CITY.

Clarke City, Saguenay county, is situated on the north shore of River St. Lawrence in the bay of Seven Islands. There is one of the most important pulp mills of the Dominion, making 125 tons of pulp per day, located here.

During the fiscal year, the sum of $7,803.04 was expended in the widening of the wharf on a length of 406 feet by 5 feet on the whole length. This addition is built with pitch pine 12 inches square. A flooring 6 inches thick, in pitch pine, has also been placed on a length of 406 feet by 40 feet in width.

Work started July 1, completed March 30, and was done by day labour.

CONTRECŒUR.

Contrecœur is an incorporated village and parish and a station on the Quebec, Montreal and Southern railway, in Chambly-Vercheres county, on the south shore of the St. Lawrence river, 30 miles below Montreal and 15 miles above Sorel. It contains 1 Roman Catholic church, 5 stores, 1 hotel, 1 saw-mill, 1 door and sash factory, 3 cheese and butter factories, 1 shoe factory, telegraph, express and telephone office, and 5 schools. The boats of the Canada Steamship Lines, Limited, call three times per week. A fine aqueduct was inaugurated here in 1903. Population, 1,700.

The main channel of the River St. Lawrence, 2 miles below Contrecœur village, turns shoreward from the centre of the river and follows the land for a distance of a mile. The Black river, flowing from the highlands between the Richelieu and St. Lawrence rivers, falls into the St. Lawrence in this vicinity and has a bed 300 feet wide at its mouth. At the request of the parish municipality, the department has granted a sum of $2,000 to protect the approaches at each end of a bridge across the Black river, along the highway. An earth embankment 300 feet long by 24 feet wide at top, to a mean height of 10 feet was constructed on both sides, inclined one in one,

protected with stone riprap cemented and the top, on a thickness of one foot, was finished with broken stones and gravel. A steel corrugated culvert, 7 feet in diameter was placed in lieu of the bridge which spanned the Rivière Noire and which has been washed out yearly by the passage of large vessels in the channel, during the spring freshets.

The work was performed by day labour at a cost of $2,000.32.

COTEAU LANDING.

Coteau Landing, the chief town of the County of Soulanges, it situated on the St. Lawrence river and on the Grand Trunk railway, 1½ miles from Coteau station, 36 miles from Montreal. It contains 1 Roman Catholic church, 1 Protestant church, grist mill, 4 stores, 5 hotels, telegraph and express offices. During summer, it has communication with Montreal by steamer. The Soulanges canal, connecting Lake St. Francis and St. Louis, starting near the Grand Trunk Railway bridge at Coteau and terminating near the junction of the Ottawa and the St. Lawrence, passes in front of the town. Population, 410.

The Coteau Lnading wharf consists of:—

1. A close-faced crib head-block, 271 feet 8 inches long outside face besides a 27-foot ice-breaker, 25 feet wide, standing 17 feet 10 inches high in 10 feet of water at low level;

2. A close-faced crib approach 92 feet 4 inches by 25 feet;

3. A crib and span approach 750 feet long, from 12 to 24 feet wide, formed of 26 cribs of timber below, and concrete above low water and supporting steel I-beams and pine flooring.

4. A freight-shed, 41 by 20 feet at upstream intersection of head-block and approach.

The rebuilding in concrete of the whole head-block was begun in October, 1910, and completed in November, 1913, as also 300 feet of the approach. The encirling wall of the reinforced concrete has a height of 6½ feet by 3 feet thick at base and 18 inches at top. The flooring of the whole head-block and crib portion of the approach is made of concrete 6 inches thick.

This year, the concrete flooring of the approach was continued and completed on a length of 240 feet.

There remains 240 lineal feet of approach floored with 3-inch pine plank, this flooring being in good condition will last for several years to come. The work was performed by day labour at an expenditure of $2,799.41.

COTE STE. CATHERINE.

Cote Ste. Catherine is a landing place on the south shore of the St. Lawrence, in Laprairie county, about 5 miles west of the village of Laprairie. A steamboat ferry plies daily between this place and Verdun, on the opposite side of the river. Population of parish, 1,300.

The wharf was commenced in October, 1899, and completed in June following at a cost of $3,199.46. It consists of a close-faced crib head-block, 83 feet long, 20 feet wide, terminated at the upper end by an ice-breaker, and an aproach 115 feet long, 18 wide, also of close-faced cribwork. The outer face of the block stands in 7 feet of water at low level.

During the present fiscal year, the headblock was raised one foot, was entirely covered with concrete, and the approach was widened 10 feet at its junction with the headblock. The approach was covered with broken stone and cinders, and the road leading to the highway was widened from 8 to 18 feet and newly graded. Two small

waiting rooms 18 by 12 feet were built, one for the Verdun wharf and the other for Cote Ste. Catherine in order to provide shelter for traffic when waiting for the ferry-boat. A new stairway from the highway to the wharf was also built.

This work was performed by day labour at an expenditure of $2,185.77.

COURS D'EAU DU BOIS BLANC.

The Cours d'Eau du Bois Blanc in the County of Maskinonge takes its rise from the foot of the Laurentide mountain at St. Justin and crosses the concession named "Bois Blanc" in the parish of St. Justin, the Ranges "Du Pied de la Cote," du "Grand St. Jacques" and of "La Rivière aux Pins" in the Parish of Maskinonge.

During the freshets, this stream floods a great area of fertile land, this being due to the shoals and land slides obstructing its course and causing great damage in the neighbourhood.

The work done in 1914, by the departmental dredge, *P.W.D. No. 124*, and consisted in removing 10,270 cubic yards of clay and earth on a distance of five arpents; the approximate total length of the work being estimated at 16,202 lineal feet for a channel of 20 feet in width at bottom and a mean depth of cut of 3 feet; this work was done by situ measurement consisting in cast-over only; the probable duration of the work will be two years more. Operations were commenced on August 14 and discontinued on October 29, last. The total expenditure incurred was $1,735.02.

In 1913, a section of the "Cours d'Eau du Bois Blanc" was deepened and widened and 6,400 cubic yards were removed.

CRANE ISLAND (NORTH SIDE).

Crane Island or Isle aux Grues, in the County of Montmagny, is an island of 900 inhabitants, lying in the St. Lawrence opposite Cap St. Ignace, 35 miles below Quebec. The community is chiefly engaged in farming, a great number of the inhabitants own schooners or other vessels.

The renewal of the surface superstructure begun last year was completed during the first part of the present fiscal year.

The cap pieces, flooring, stringer and two courses of face timbers were renewed on a length of 444 feet, the width of the wharf being 22 feet.

Thirty spruce fenders 23 feet long were replaced, and the spruce sheathing has been renewed on the outer face of the wharf.

Th top of the mooring posts were covered with sheet-iron.

The works were done during the months of July, August, and September. The total expenditure was $2,498.91.

CRANE ISLAND (SOUTH SIDE).

The wharf on the south side of Crane island is used as a harbour by schooners in the spring, as a protection against ice. It is also of utility during summer, as a refuge against east gales and storms. Unfortunately, the depth of water available at low tide is not sufficient to allow vessels of considerable draught to use the wharf and it will be desirable that it be extended so as to provide a greater depth of water at low tide, increasing thereby its efficiency as a harbour of refuge. There is a heavy lighthouse built on the outer end of the wharf straining the structure which, on that account, must he kept in a very good state of repair.

The heavy repairs undertaken last season were continued and completed in the course of the present fiscal year.

From a point 150 feet distant from the outer end, on a length of 90 feet going shorewards, on a mean height of 5 feet, the structure was torn down and rebuilt with new timbers, including face timbers, cross ties, longitudinals, stringers and flooring;

thence on the west side, two rows of face timbers, 100 feet long, were renewed. A new flooring with most of the stringers was laid on a length of 490 feet and 800 feet of cap pieces were renewed. The sheathing, 50 feet long on both sides of the outer end, was repaired.

These works were carried on between July 24 and October 24, at a cost of $2,489.54.

CROSS POINT.

Cross Point, Bonaventure county, is situated on the north shore of the Restigouche river, opposite the town of Campbellton, N.B.

A ferry boat plies between Cross Point and Campbellton every half hour.

The work done during the present fiscal year consisted in the completion of the landing slip and the protection on the north side, begun last year.

The slip has been widened upon 40 feet. The protection on the north side is 132 feet by 20 feet wide and 15 feet high; the total length of the protection pier is 205 feet on the west side.

The whole of the work was built in round timber, sheathed with 3-inch deals, planked and fully ballasted.

Urgent repairs were also made to the wharf, consisting in the renewal of the planking and the cap-pieces.

Amount expended, $1,831.12.

D'AUTRAY.

D'Autray is a small village at the northeastern extremity of the parish of Lanoraie, Berthier county, some 4½ miles north of Lanoraie and 4½ miles south of Berthierville. It contains one saw-mill, one grist mill, store and post office.

The object of this work is to facilitate the loading of the important lumber, hay, oats and potato trade of the locality.

From August 10 to August 15, departmental dredge *No. 103* removed some 1,524 cubic yards, scow measurement, of clay and sand in making an 8-foot channel. Hours of actual dredging, 37; cuts, 22-23 feet wide; face, 6 to 7½ feet; distance advanced, 200 feet; dumping grounds, 1 mile upstream on west side of St. Lawrence river.

Dimensions of work done: one cut 200 feet long by 22½ feet wide average, at outer extremity of proposed basin.

To complete original project, some 12,682 cubic yards, *situ*, or 16,919 cubic yards, scow measurement, of clay and sand will have to be removed. Dimensions: 100 feet long along shore or northwest and 260 feet southeast by 116 feet deep to 8 feet below extreme low water line.

During 1913, departmental dredge *No. 103* dredged out some 4,485 cubic yards, scow measurement, at outer end of basin.

DESJARDINS.

Desjardins, in Pontiac county, is located on Allumettes island, north shore of Ottawa river, opposite town of Pembroke, Ont.

Improvements were made to the wharf July 6 to 28, and March 22 to 25.

In July, the freight shed was moved from the corner of "L" to the upstream end of the wharf. The crib on which the shed formerly stood was levelled up and flooring placed, adding to wharf area nearly 700 superficial feet. The wharf was raised 2 feet 4 inches at the west end, 60 feet long by 36 feet wide. One new fender placed, steps were built to accommodate launch traffic, and new window glass placed in shed. The 2-ply w.i. pipe handrailing was extended 84 feet along back of landing-head to freight shed. The shed, railing and fenders were given a coat of paint.

In March, some 1,200 feet b.m. of sheeting was replaced around wharf.

Expenditure to March 31, $999.89.

DESCHAMBAULT.

Repairs and renewals were done at Deschambault wharf and approaches, in the County of Portneuf.

On west side of wharf on a length of 194 feet by 5 feet 4 inches wide, the old sheathing was removed and renewed with 3-inch spruce, covered with two coats of hot coaltar, including the steel protection plate on upper edge and lower angle.

Five thousand four hundred feet b.m. of 3-inch deals were used in doubling over old flooring of portion not repaired in 1913, also all damaged capping was made good.

The waiting room and freight shed were thoroughly repaired and painted.

The roadway approach on western side was repaired, graded and covered with 200 loads of coarse gravel and sand its full width of 25 feet and length of 650 feet; on one side of roadway, sidewalk of 2-inch spruce deals, on a width of 4 feet, was completely renewed; about 1,600 feet of guard rails, fencing and posts were repaired and painted; 1 toise of riprap stone hauled and placed on east side of wharf where some scouring had occurred, and a set of side stairs 10 feet long was placed on west side. Expenditure was $1,096.

D'ISRAELI.

D'Israeli is an incorporated village and parish in Wolfe county on the St. Francis river at the head of Lake Aylmer, a station on the Quebec Central railway between Quebec and Sherbrooke. It has twenty-eight stores, one Roman Catholic church, two saw-mills, one sash and door factory, two butter and cheese box factories, telegraph, telephone and express offices, one bank. The population is 2,700, and it has a large trade in lumber and pulp wood.

Work was commenced by day labour on June 15 and carried intermittingly until July 23, 1914, and consisted in riprapping one side of the stone approach and grading it with gravel, repairing the fence and renewing some of the floor beams and the flooring on the thirty foot span.

In the execution of the above works 532 tons of stone, 3,300 feet of lumber and several loads of gravel were used.

During the fiscal year 1914-15, the expenditure was $501.41.

DOUCET'S LANDING, OR STE. ANGELE DE LAVAL.

*Dredging.*

Ste. Angele de Laval is a post village on the south shore of the River St. Lawrence, directly opposite Three Rivers. Communication is made by the Branch line of the Grand Trunk railway with the Quebec, Montreal and Southern railway at St. Gregoire, County of Nicolet; with the Intercolonial railway at Aston Junction, County of Nicolet; and the Grand Trunk railway through line from Montreal to Quebec at Victoriaville, County of Arthabaska.

The population of Ste. Angele de Laval village is about 800.

Dredging was performed by dredge *Capital* and work was commenced on November 27, and continued until December 9, 1914, and consisted in the removal of 2,000 cubic yards, place measurement, or 2,449 cubic yards, scow measurement, of Class "B" material and 11 cubic yards of Class "A" material. 20 per cent being the approximate expansion factor.

Average depth of cut; one foot, six inches; finished, twelve feet below extreme low water level or below water level of gauge at Three Rivers.

The object of this work is to provide a safe landing to the ferry boat *Progress*, making the service between Three Rivers and the south shore; the whole project has

not been completed, owing to the difficulty of dredging among the floating ice; for this reason, the work had to be shut down on 9th of December, the ice becoming too thick.

Expenditure, $1,051.39.

DOUGLASTOWN.

Douglastown, situated in Gaspé bay, is a village of fishermen and farmers, standing on the rising ground on the south side of the entrance to the St. John river. The population is between 1,500 and 1,800.

Up to the end of the fiscal year 1913-14, four hundred and fifty feet of shore end of the landing pier were completed to coping. This part consists of 22 by 27 cribs with 22 feet spaces between, built on a foundation of fascine mattresses laid on a shifting sand bottom.

During the last fiscal year, the pier was extended 147 feet.

Expenditure, $3,975.57.

ECHAFAUD AUX BASQUES.

Echafaud aux Basque, Saguenay county, is a shelter for schooners in the coasting trade, situated 5 miles from Ste. Catherine bay.

During the fiscal year, the sum of $479.70 was expended in the removal of boulders situated in the mouth of the river which were a danger for schooners that come to load.

Work started August 11, completed August 26, and was done by day labour.

ESCOUMAINS.

Escoumains is an important village situated on the north shore of River St. Lawrence, in Saguenay county, some 26 miles below the mouth of River Saguenay. Population about 1,000.

During the fiscal year, the sum of $1,541.65 was expended in repairs to the wharf, which consists in sheathing the east side and renewing the fenders, 10 inches square, on both sides of the wharf upon a length of 550 feet, a derrick has been placed to facilitate the unloading of schooners coming alongside, the road leading to the wharf has been repaired and guards placed where necessary.

Work started June 18, completed October 3, and was done by day labour.

FABRE.

Fabre, in Pontiac county, is an agricultural centre with a population of 1,000, located on the east shore of Lake Temiskaming, 11 miles south of Ville Marie.

In September, minor repairs were made to broken ice-wale on north and south sides of approach and to riprap wall on north side corner of approach roadway.

Expenditure to March 31, $99.98.

FASSETT.

Fassett, a village in Labelle county, is located on the north shore of the Ottawa river and on the Canadian Pacific railway. Population 1,000.

159 feet of bank protection was constructed on east side of public roadway leading to Government wharf on the Ottawa, from November 17 to 28.

The work consisting of a riprap slope-wall 2 feet thick, 9 feet wide for a distance of 60 feet and from 1 to 9 feet wide for a distance of 99 feet. 72 cubic yards of stone were used in the work.

Expenditure to March 31, $199.

FATHER POINT.

Father Point, in the County of Rimouski, is situated on the south shore of the St. Lawrence river, six miles below the town of Rimouski. It is the place where the ocean liners call to take and land their pilots.

There is a powerful compressed air fog horn, an acetyline gas light-house and a Marconi wireless telegraph station.

The work done during the present fiscal year consisted in the completion of a part of the sheathing begun last year, general repairs were also made and temporary repairs to the wharf which had been badly damaged by the storm of November 22.

Expenditure, $589.92.

FERME-NEUVE.

Ferme-Neuve, Labelle county, is an important farming and lumbering settlement on the Riviere du Lievre, 12 miles north of Mont Laurier, and 112 miles from the mouth where it empties into the Ottawa.

The construction of a revetment wall at Ferme-Neuve, to protect the bank along the main street from erosion, was started October 1 and completed November 30.

The wall is 410 feet long and consists of round timber cribwork 9 feet high and 8 feet wide, stone ballasted and sheeted with 3-inch plank, built to an elevation 6·5 feet above M.L.W.L., and stone riprap work, with a slope of 1 on 3, covering earth backfill from top of cribwork 12 feet above M.L.W.L., or to extreme high water level.

Expenditure to March 31, $2,878.12.

FORT COULONGE.

Fort Coulonge, a village on the Waltham branch of the C. P. railway, in Pontiac county, is located on the north shore of the Ottawa river.

The cribwork wharf which was started and nearly finished in March last, was completed during the past season.

In April, the low level approach roadway was built, 12 feet wide by 30 feet long, at a cost of $25.

During part of June and July, the main approach roadway, some 300 lineal feet by 16 feet wide, was crowned with gravel. 224 yards of gravel were required to complete the work satisfactorily.

The completed wharf has a cribwork landing-head 36 feet along face by 30 feet wide with three levels at two, six and ten feet above L. W. L. The two higher landings are provided with slips. The approach to middle and high levels is composed of a crib 10 feet by 24 feet with a span to landing-head 28 feet long by 24 feet wide. The approach roadway of stone riprap and earth filling is 16 feet wide by some 300 feet in length.

Expenditure to March 31, $480.50.

FORT WILLIAM.

Fort William is a village and summer resort in Pontiac county, on the north shore of the Ottawa river, 14 miles west of Pembroke. Population in vicinity placed at 800.

Necessary repairs were made to wharf during past summer. An agreement was made with Mr. C. L. McCool of this place, to do the work for $100, which was carried out satisfactorily.

Two new oak fenders, 10 inches by 10 inches by 12 feet were placed; 28 lineal feet of 10 inches by 10 inches waling; minor repairs were made to wharf flooring, and handrailing was painted.

Expenditure to March 31, $100.

GASPÉ BASIN.

The deep water pier to be built in the outside deep water basin at Adam's Bluff, terminus of the Quebec, Atlantic and Western railway, was completed, and the roadway which had been damaged by storms was rebuilt and protected on the outside face for a length of 80 feet by a timber protection breastwork well backed by stone ballast.

Amount of contract, $273,985.

GATINEAU RIVER (BANK PROTECTION).

The Gatineau river, in Wright county, flows south emptying into the Ottawa river one mile below Hull.

The erosion of the east bank of this river, below the C. P. R. bridge, was doing considerable damage and destroying valuable land. To check this erosion, a riprap protection wall has been under construction for the past three years.

During 1912-13, material was collected on the ground, at an expenditure of $962.66.

During 1913-14, 380 lineal feet of bank protection was constructed, consisting of riprap wall 33 feet wide, 1½ feet thick, with a slope of 1 on 3, at an expenditure of $3,082.15.

In 1914, the bank protection work was proceeded with July 17 to October 21.

500 lineal feet of protection work was placed, consisting of a riprap wall 40 feet wide and 1 foot thick, with a slope of 1 on 3. The stonework rests on fascines of brushwood, 1 foot thick, placed parallel to the river. 1,200 yards of stone were put into the work.

500 lineal feet of booms, owned by the department, with a draught of 3 feet, were stretched along and anchored to shore for temporary protection.

Expenditure to March 31, $3,104.01.

GEORGEVILLE.

Georgeville, Stanstead county, is an incorporated school municipality on the east side of Lake Memphremagog, 11 miles by road from Magog, the nearest railway station. The permanent population is 200, increased to 300 in summer, due to its popularity as a summer resort. There are five stores, two churches, post office and telephone. It is connected in winter to Magog and Smith's Mills by stage. In summer, two steamers call twice daily, running between Newport, Vt., and Magog, Que. The surrounding country is rich agriculturally and for 5 miles in any direction is tributary to Georgeville. When the steamers are running, all freight and passengers from this territory are handled by them.

At the last session of Parliament, the sum of $500 was voted for the construction of a new landing stage for small boats. On May 4, 1914, authority was received to expend this amount by day labour.

Work was commenced on October 5, and carried on intermittingly until October 23, 1914, and consisted in repairing the old wooden stage, renewing one of the mooring posts, constructing a low concrete landing stage of two different levels for the small boats and paving in concrete 6 feet at the front of the wharf to prevent its washing during high water. In the execution of the above works, 200 bags of cement, and 757 feet b.m. of spruce lumber were used.

During the fiscal year 1914-15, the expenditure was $507.25.

GRAND ENTREE.

Grand Entree harbour at the eastern end of the Magdalen Islands group was in danger of being partly destroyed through the sea washing over the sand bar which encloses the harbour on the southwest side.

A protection breastwork was decided upon and some six hundred feet were built over fascine matresses, fully ballasted and the ends of cribs and faces protected by heavy stone ballast.

The shed on wharf was raised and shoved back from front so far as to allow the raising and repairing of the wharf and the sheet piling along front was done.

Expenditure, $4,133.07.

GRAND MARSH (STE. CLOTHILDE).

Ste. Clothilde de Chateauguay, a post village and parish in Chateauguay county, is situated on Norton creek, 2 miles from Holton and 9 miles from St. Remi, on the Grand Trunk railway. It contains a Roman Catholic church, one Protestant church, five stores, one hotel, two saw-mills and three butter factories, with express and telegraph offices at St. Remi, and banking facilities at Ste. Martine, the county town. Population of parish, 885.

The work undertaken by the department consists in excavating Norton creek in order to increase the flow of water during spring freshets and thus drain approximately 18,000 acres of land known as Grand Marsh, practically flooded all year round.

This excavation, which is in solid rock, will be approximately 5 feet deep by 60 wide, and 3,450 feet in length.

During the present fiscal year, 3,222 cubic yards of rock were blasted and removed on each shore and 2,750 cubic yards of loose stone and loam were excavated. There remains approximately 17,000 cubic yards of rock to be blasted and removed in order to complete the work.

This work was done by day labour at an expenditure of $4,987.42.

GRANDE RIVIÈRE.

Grande Rivière, County of Gaspé, is the name of an important fishing centre, some 21 miles southwest of Percé.

During the year 1910-11, steel concrete blocks to complete sheathing of 10,000 superficial feet were made but could not be secured in place and had to be stored for winter on account of hoisting engine not being delivered in good time. Diver was employed with helper three weeks to remove obstructions and to fill worst places on outside 300 feet with some four hundred bags of cement.

As mentioned in previous reports, the outside face timbers eaten by sea worms were carried away by the sea, together with most of the stone ballast in the outer section between the lower and upper ballast floors. Spruce sheet piling was placed alongside but it was carried away on account of the suction of water that gathered behind in the sections without stone ballast.

In the fall of 1911, the outside face pockets were emptied of stone ballast, the top ballast floor removed and the lower pockets well cleaned of stones and dirt. The sides of these pockets were lined with deals and heavy canvas to receive the concrete, three pockets on the outside end were filled with concrete up to the average low-water level.

In November, 1911, during the heavy fall gales the upper structure of the pier was partly destroyed and after having a thorough survey and examination made by a reliable diver, it was estimated that the repairs needed, besides the concrete works, would amount to some $10,000. Some temporary repairs at a cost of $684.42 had to be made at once.

During the fiscal year 1912-13, a diver was employed to continue the work done in 1911 for a length of 30 feet and to remove the débris and stone ballast along inside face of work so as to sheath the inside with 10- and 12-inch spruce down to rock bottom and replace ballast to keep the top of the pier from being carried away. A length of 100 feet was sheathed as mentioned above.

This spring, 1915, the balance of the plant needed to place the concrete beams in position was ordered but delays, especially in transportation, caused the work to be set back.

While waiting for the plant, i.e., 30-ton derrick, double drums for steel winch, a large scow, a clam-shell digger, rails, etc., the top of the wharf was repaired for a length of some 300 feet and an irregular gap of some 12 feet wide about the middle of the pier in the substructure where the sea could work through was closed and filled with concrete and stone.

The inside of the pier was cleaned and dredged out by diver and clam-shell, a depth of 9 feet of stones and mud was removed. The stones were used in the pier and the dirt carted ashore. A box 4 feet high by 5 feet wide at toe was then lowered in trench to be filled with concrete so as to receive and secure into position the foot of the grooved steel concrete beams used as sheathing on inside face of the pier. Then reinforced concrete beams were built through wharf to anchor the inside sheathing above low-water level to the pier and outside mass concrete buttresses built previously and outside face. All of the spaces between sheathing and old broken-up work was thoroughly packed with mass concrete.

Expenditure, $6,678.78.

GRENVILLE.

Grenville, a village in the County of Argenteuil, is located on the north shore of the Ottawa river about 58 miles below Ottawa. Population 1,200.

The departmental dredge *No. 113* worked at Grenville (June 1-12) providing a launch basin beside the public wharf. A sheltered harbour for small boats was required at this place.

An area of some 7,300 superficial feet was dredged to a grade depth of 6 feet.

1,092 yards (scow measure) and 1,830 yards casting over were removed. The material consisted of clay and boulders, a great many of which it was necessary to blast before they could be handled by the dredge. The place measure quantity, from surveys before and after dredging is 1,808·5 cubic yards, which gives an expansion factor of 62 per cent. This large expansion is not accurate, on account of the fact that a large portion of the casting over slipped back into the cut and was handled twice.

This work was begun in 1913, when 1,911 yards were taken out by dredge *No. 113*.

GRINDSTONE.

The roadway leading to the Grindstone wharf having been damaged, 228 cubic yards of stone ballast were replaced at a cost of $799.52.

GRONDINES.

Repairs at Grondines wharf, County of Portneuf, during last fiscal year were:

On west side of wharf, a length of 19 feet by 9 feet was renewed with 5-inch pine sheathing and another length of 93 feet by 19 feet high with 3-inch spruce deals all well secured to reinforced or new stringers; the whole covered with two coats of hot coal tar.

Old flooring on wharf, not repaired in 1913, was doubled over with 3-inch spruce deals; surface covered 3,000 square feet, completing repairs to whole timber flooring.

Five hundred and ninety-seven feet of fencing on northern limit of Government property (beach and water lot) at high water line had to be renewed; materials used were 6-inch square cedar posts, placed 10 feet apart, some at 5 feet with proper braces; wire fencing 54 inches high was secured to the posts all through. As the fence had to rest on a flat of solid limestone, without any vegetation, each post had to be secured and set in concrete casings 18 inches high cemented with the rock.

Foundations of waiting room, laid down on dry stone masonry had got loose; they were raised and properly secured with concrete masonry; freight shed (movable) was also overhauled and repaired.

After repairing interior and exterior of waiting room, two coats of paint were applied to same, also to outside of shed, all fencing new and old including some 800 feet of guard railings, posts, cattleguards, mooring posts, and capping of gravel was laid on roadway approach.

GROSSE ISLE.

Grosse Isle is the northeastern end of the Magdalen islands in the Gulf of St. Lawrence some 70 miles west of Cape Breton. As the northeast coast of the island is badly exposed, a breakwater to form a shelter for fishermen was decided upon. Two triangular isolated cribs 56 feet wide by 38 deep were commenced during the course of last summer and one placed in position.

Expenditure, $3,185.10.

GROSSE ISLE (WESTERN WHARF REPAIRS).

Grosse Isle is situated in the St. Lawrence, some 30 miles below Quebec, and 6 miles from the south shore. It is used by the Government of Canada as a quarantine station for vessels coming up the St. Lawrence.

Two wharfs are available at Grosse Isle for the accommodation of the boats attached to the quarantine service, one at the western extremity, or healthy division; the other at the eastern end, or hospital staff. As it is now, the connection between the island steamers is made by means of a tender, a slow process liable to cause delay and annoyances that would not exist if sufficient wharfage accommodations were provided, therefore, it would be desirable that the western wharf, at least, be extended and enlarged so that steamers might draw alongside at any time, and land in a minimum time, thousands of immigrants and luggage, whenever required for disinfection.

The work done during the present fiscal year consisted in the following:—

The outer part of the wharf having settled under the heavy loads of broken stone and sand required for concrete works at Grosse Isle, the sum of $1,500 was authorized to raise and level the flooring and stringers upon a length of 140 feet on the whole width of the wharf, 60 feet. The work was started in November and completed December 12. The total expenditure was $1,499.94.

In order to enlarge the platform of the shore end of the western wharf so as to allow the construction of a close shelter for immigrants while waiting for disinfection, the sum of $4,198.59 was expended during the present fiscal year.

To provide a foundation, a concrete wall was built 110 feet long, 12 feet high, the thickness being 3 feet at the base, tapering to two feet at the top.

Six cement pillars were also built, 12 feet high and 3 feet square, to support the interior framing of the structure.

The first plan adapted by the quarantine authorities was to construct an open shelter, 12 feet high, and the framing of such a construction was started and carried on the required height but later the plans were changed and a two-floor close shelter was required to be built and the work was done accordingly.

The work was started in July and completed in December.

GROSSE ROCHE.

Anse à la Grosse Roche, in the parish of Sacre Cœur, Saguenay county, is situated on the north side of River Saguenay, 12 miles from its mouth. Population, 1,500.

During the present fiscal year, an addition 20 feet in length, 30 feet in width and 30 feet high was built to the wharf.

It is of common timber construction, well ballasted with stone, sheathed on the front with 6-inch hardwood planks, and the sides with 4-inch deals. The shed on the old wharf has also been repaired and painted.

Work started July 6, completed October 29, and was done by day labour.

HARRINGTON HARBOUR.

The village of Harrington is built on a small island; these islands are so situated that they make one of the best shelters on the north shore. There are two churches, Anglican and Methodist, an hospital for seamen. Population is composed of fishermen, about 60 families reside there during the winter. Harrington is situated 110 miles below Natashquan.

Of the $2,000 voted at last session of Parliament, the sum of $77.25 has been expended to purchase iron with the view of building an extension to the wharf.

HIGH FALLS.

High Falls, a village in Labelle county, is located on the east shore of the Rivière du Lièvre, 26 miles above Buckingham.

Owing to the boat, on the stretch above High Falls, not having taken her regular trips till late in the summer, the float was left high and dry. It had to be raised, put on skids, floated and partly reconstructed June 7 to 12.

Expenditure to March 1, $91.21.

HONFLEUR.

Honfleur, Chicoutimi county, is situated on River Peribonka, some 9 miles from its mouth. It is a new settlement where boats coming from Roberval call twice a week.

During the fiscal year, the sum of $464.42 was expended in the construction of a landing pier. When completed it will be 120 feet long, 30 feet wide and have 16 feet of water at the outer end.

Work started August 28; completed September 12, and was done by day labour.

HOSPITAL BAY.

Hospital Bay is a fishing harbour on the northwest side of Grindstone island. The first crib of a breakwater 24 feet wide by 60 feet long was partially built and materials bought for the prosecution of the work.

Expenditure: $1,280.43.

HOUSE HARBOUR.

The landing at House harbour was partially repaired; 83 piles have been driven and eight tiers of cross-ties and longitudinals replaced at a cost of $1,083.35.

HUDSON.

Hudson is a post village in Vaudreuil county, on the River Ottawa, and on the Canadian Pacific railway (short line), 9 miles from Vaudreuil and 35 miles from Montreal. It is a landing of the Ottawa steamers, and contains 1 Methodist church, 1 Roman Catholic church, telegraph, express, and telephone offices, 1 woollen factory, 1 hotel and 2 stores. Population, 500.

The object of this dredging was to facilitate access to the public wharf by boats and barges.

The site of work done is 400 feet upstream of the Government wharf or north of same.

From June 1 to June 3, departmental dredge *No. 13* removed some 65 cubic yards, scow measurement, of rock. Hours of actual dredging 25; cut 45 feet wide; face 2·6 feet; distance advanced, 114 feet; dumping grounds ¼ mile down stream. Dimen-

sions of work accomplished, 75 feet long by 40 feet wide average. The total number of cubic yards, place measurement, 36, with an expansion factor of 80 per cent for conversion into scow measurement.

HULL.

Hull, a city in Wright county, with a population of 18,200, is located on the Ottawa river, opposite Ottawa.

The freight shed, 40 by 53 feet, on the Hull wharf, was given two coats of paint, minor repairs were made to the roof by tinsmith and a new door was placed. Some 600 lineal feet of pipe handrailing was painted.

Expenditure to March 31, $141.10.

HUNTERSTOWN.

Hunterstown is a village situated on the western shore of Rivière du Loup (en haut), in the County of Maskinonge, 2½ miles north from St. Paulin; 25 miles from Louiseville. Population, 600.

As freshets were the cause of exposing properties to great damages, it was decided to build a stone riprap along the shore in order to protect the village.

The work done by day labour was commenced August 22, completed September 6, 1914, and cost $470.64.

ILE-AUX-COUDRES.

Ile-aux-Coudres is situated in the County of Charlevoix, in the St. Lawrence river, about 62 miles below Quebec. Population, 1,500.

The extension to the wharf at Ile-aux-Coudres was completed in the course of the last fiscal year. This extension consists of a structure of cribwork filled with stone, 83 by 40 feet at the top, 55 feet deep, with a batter on its north and west faces of 1 in 12. The new block rests on the bed of the river previously dredged to a level of 29 feet below low water level. The face of the old wharf was demolished and rebuilt so as to tie in with the face of the new block. The front and sides of the new structure above low water level are protected with hardwood sheathing, fenders and carlings. The block is also supplied with steel ladders, mooring posts and slip.

Contractors, Joseph, Edouard and Ernest Tremblay.

Total expenditure for fiscal year was $19,706.23.

*Old Wharf.*

Urgent minor repairs to the old wharf were effected and lumber for more extensive repairs to the wharf was bought at a total expenditure to date of $1,132.

Work was done by day labour.

*Dredging.*

In order to provide required crib site for the new addition to the wharf, dredging was performed on an area of approximately 4,500 square feet; the materials excavated being sand and boulders.

7,333 cubic yards, scow measurement, were excavated.

The work was performed by the departmental dredge *Ottawa,* from July 28 to August 22, 1914.

ILE PERROT.

Ile Perrot, a post office in Vaudreuil county, 3 miles from Ste. Anne de Bellevue, a station on the short line, Montreal and Ottawa division, of the Canadian Pacific railway and Grand Trunk railway, 21 miles west of Montreal.

The Ile Perrot south public wharf built by contract 1886-90 being in such a dilapidated condition that it was dangerous to leave it open to traffic, it was decided to build a new wharf in front of the church where it will be less exposed to the spring ice shoves and more centrally located.

The new wharf when completed will consist of:—

1. A stone approach 80 feet long by 20 wide.
2. A close-faced stone filled crib 80 by 35 by 15 feet.

During the fiscal year, all the materials for the construction of the wharf were bought. Fifty per cent of the stone approach was built and the road leading from the wharf to the King's highway was graded for a distance of 250 feet.

This work was done by day labour at a cost of $4,870.01.

### ISLE VERTE.

The village of Isle Verte, in the County of Temiscouata, is situated on the south shore of the St. Lawrence, 16 miles below Rivière du Loup, and 130 miles below Quebec.

Spring tides rise 19 feet, neaps, 12 feet.

During the fiscal year, the whole structure of the wharf on a length of 132 feet, a width of 22 feet and on a mean height of 12 feet, was completely renewed.

This part of the wharf, built 28 years ago, was entirely taken down and rebuilt.

The western head of the block and the outer end, 50 feet square, was also repaired; two rows of face timbers, the cross-ties, stringers and pavement were renewed; the stairway was repaired and the flooring of the wharf, where needed; the waiting room was painted outside and inside.

For the accommodation of schooners, a crane was installed upon the head of the wharf.

These works were carried out during the months of July, August and September. The total expenditure was $3,498.30.

### MICHAUD'S WHARF AT RUISSEAU BLANC.

Ruisseau Blanc, in the County of Temiscouata, flows through the parish of Isle Verte and empties into the St. Lawrence, about 4 miles east of Isle Verte church.

It forms part of the parish of Isle Verte whose population is 2,500. The chief trade of the place being the sea-moss industry. To help this industry in providing landing for scows engaged in that work, a small landing pier was built during the last trade of the place is the sea-moss industry. To help this industry in providing

For want of appropriation, it was not completed and during this fiscal year the sum of $499.98 was expended to complete the small landing pier, by the addition of one row of face timber and the paving of the surface with spruce deals.

The approach from the highway to the wharf was raised and finished with sand and gravel.

The works were carried on during the months of July and August.

### KNOWLTON LANDING.

Knowlton Landing, Stanstead county, is situated on the west side of Lake Memphremagog about 11 miles by water and 15½ miles by road from Magog, the nearest railroad station on the through line of the Canadian Pacific railway. It contains one general store and two summer hotels. Two steamers making daily round trips between Magog and Newport, Vermont, call from the beginning of May to the end of September. During the time the boats are running, the wharf is used by the population for a distance of three to ten miles as a means of transport for freight of all kinds and passengers up and down the lake.

At the last session of Parliament, the sum of $8,600 was voted for the reconstruction of the wharf at this place. On April 24, 1914, Order in Council was passed authorizing the acceptance of the tender of Messrs. Loomis, MacBean and Williams of Montreal for the reconstruction of the wharf for $7,395.

On November 9, 1914, authority was received to build the wharf ten inches higher than specified at an additional cost of $375 and on November 17, 1914, authority was also received to have a shelter built on the new wharf at a cost of $350, these additional works to be proceeded with by the contractor.

The work consisted of:—

1st. In taking down the pile head-block.

2nd. In the construction of a crib close-faced on the outer faces and open-faced on the inner face; the outer face standing in eleven feet, six inches of water at extreme low water.

3rd. Stone filling of the space left empty by the taking down of the head-block and of all the space between the approach and the crib.

4th. In building a shelter for the use of the public.

The present head-block is 100 feet long by 50 feet wide including a low landing stage, 40 feet long and 4 feet wide on the rear side of the head-block.

Construction was begun on September 17, 1914, and completed in the middle of January, 1915.

The expenditure was $8,411.

### LAKE KENOGAMISHISH.

Lake Kenogamishish, Chicoutimi county, is part of the village of Hebertville, situated on the lake of the same name, it is known as Mesy. Population, about 50 families mostly engaged in farming.

During the fiscal year, the sum of $1,516.10 was expended in the construction of two landing piers.

They are of round timber construction of the usual type sheathed with three inch deals and ballasted with earth and sand. The pier on the south side is 60 feet in length by 30 feet in width, the north side one is 100 feet in length by 30 feet in width and 17 feet high.

Work started August 17; completed September 25, and was done by day labour.

### LAKES STE. MARIE AND ST. JOSEPH.

Lakes Ste. Marie and St. Joseph are situated in the parish of St. Adolphe d'Howard, County of Argenteuil, with a scattered population in the locality of about 500.

The improvement in Riviere aux Mulets, to facilitate launch navigation during low water, between lakes Ste. Marie and St. Joseph, was carried out September 5 to 30.

The channel was excavated to a depth of 3 feet at extreme low water level, 23 feet wide for a length of 1,225 feet. Some 2,000 yards of sand and gravel were removed and 10 yards of rock were blasted out.

Expenditure to March 31, $1,199.29.

### LALANCETTE.

Lalancette, Chicoutimi county, is the best landing place in the River Mistassini. Population 800.

During the fiscal year, a freight shed 18 feet by 20 feet was built, the road leading to the wharf, 200 feet long by 20 feet wide, has been built and fences on both sides have been erected.

The work was carried out by day labour.

Amount expended, $500.37.

LANORAIE.

Lanoraic is a post village and parish in Berthier county, on the north shore of the St. Lawrence river, 5½ miles from Lanoraie station on Canadian Pacific railway, 46 miles northeast of Montreal. It is a port of call of the Berthier and Three Rivers line of the Richelieu and Ontario Navigation Company, now Canada Steamships Lines, Limited. It contains 1 Roman Catholic church, 1 college, 1 convent, 4 primary schools, 7 stores, 2 butter factories, 2 bakeries, 2 butcher shops, 2 blacksmith shops, etc. Population of village, 900, of parish, 1,605.

The wharf consisted of:—

A. A crib head-block 107 by 40 feet and 21·4 feet high, including ice-breaker, sunk in 12 feet at low water level;

B. A stone filled crib approach 246 feet long by 23 feet wide with ice-breaker for its full length.

The department entered into a contract on January 3, 1914, for $6,345 with A. Daignault for the construction of an extension 40 by 40 feet at the east end of the head-block, also for the reconstruction of the old head-block from low water level to its former height.

The contract not being completed during last fiscal year, the sum of $1,400 was authorized for its completion during the present fiscal year, which was satisfactorily done.

During the last session of Parliament, the sum of $2,800 was voted to rebuild the approach of the wharf. An agreement was entered into with the contractor, A. Daignault, to perform that work for the sum of $2,780.

It consists of:—

(*a*) To replace the wood sheathing of the inclined face of a length of 246 feet by a width of 13 feet with reinforced concrete one foot thick.

(*b*) Fill in and level with small stone the whole approach on a width of 18 feet and put a 6-inch layer of concrete on top, having a crown of 6 inches.

(*c*) Replace the old wooden wall on the downstream side with a concrete wall 246 feet long, 3 feet thick at base, and one foot thick at top to the required height, the concrete to be mixed 1-3-5; ½-inch cross iron bars, passing through the incline face, the flooring and the wall placed at every 5 feet.

(*d*) A movable storehouse and waiting room, 18 by 30 feet, painted two coats.

The work was satisfactorily completed at a cost of $4,317.

LAPRAIRIE.

Laprairie is a town in Laprairie county, on the south shore of the St. Lawrence, and a station on the Grand Trunk railway. It contains 2 churches (Presbyterian and Roman Catholic), 8 stores, 4 hotels, saw and carding mills, 1 brickyard, 1 tomato cannery, 2 agricultural implement factories, 2 butter factories, post office, branch of Banque d'Hochelaga, and telegraph, telephone and express offices. It is a beautiful spot near Lachine rapids, much frequented in summer. Communication with Montreal twice a day by railway and four times a day by steamer. Population, 1,400.

Work on the protection embankment begun in October, 1910, on the shore road from Laprairie wharf downstream to River St. James, a distance of 3,800 feet thence following the shore to a point 4,200 feet east of River St. James, approximately 4½ miles from St. Lambert.

This protection dyke consists in the construction of an earth embankment, 8,000 feet long, by 24 wide at the top, and an average height of 18 feet above low water. Both slopes are to be protected by a handlaid, cemented, stone riprap, and the top is to be completed by a 24-inch macadamized roadway.

The department has decided to do the balance of the work by contract; before granting the contract, it was judged advisable to place galvanized corrugated culverts at different places to drain the land south of the embankment.

A contract was awarded in January, 1914, to Duranceau & Poupore, of Laprairie, for the completion of this protection dyke and a roadway thereon, on a unit price basis, amounting approximately to $70,051.60.

During the present fiscal year, the total filling and almost all riprapping were done, a portion of the road, some 1,500 feet was constructed, and all the stone necessary for the completion of the contract was delivered on the site of work.

Total expenditure, including salary of inspector, $55,422.68.

*Temporary Road.*

During the construction of the permanent dyke, a temporary road was constructed in order to accommodate the traffic and general travelling public. This work was given by contract to the contractors, Duranceau & Poupore, who are building the protection dyke for an additional sum of $4,000. This contract was granted in May last and was to be paid for as follows: Two thousand dollars when open to traffic, one thousand dollars in the month of July, and the last one thousand dollars at the expiration of the main contract in July, 1915.

The contractors have fulfilled their share of the contract and $3,000 have been paid to date.

LA SALETTE.

La Salette, a village in Labelle county, is located on the lower reach of the Lievre river, 18 miles above Buckingham. Population 350.

The departmental dredge *No. 102* worked in the boat channel on the west side of the river (June 22-July 7) to facilitate navigation through the landside which occurred some years ago. A cut 569 feet long by 30 wide to a grade depth of 8 feet was made.

4,779 yards cast-over of clay were removed. The corresponding place measure quantity from surveys before and after dredging is 4,173 yards and the expansion factor is, therefore, 14.5 per cent.

LAVALTRIE.

Lavaltrie, a post village and parish in Berthier county, on the north shore of the St. Lawrence river, 8 miles from Lavaltrie station on the Canadian Pacific railway, 44 miles northeast of Montreal, contains 1 Roman Catholic church, 4 primary schools, 1 shoe factory, 1 grist mill, 1 saw-mill, 3 butter factories, 5 stores, 3 blacksmith shops, 1 boarding house, telegraph and telephone offices. Population, 1,210.

In November, 1907, materials were bought to repair and enlarge the old wharf purchased the preceding year from the Richelieu & Ontario Navigation Co., for $1,800. This property is composed of:

(a). A crib headblock, 65½ by 31 feet at bottom and 56 by 31 feet at top.

(b). A crib approach, 150 by 19 feet and a right of way 50 by 130 feet, leading to public road.

The work done during the year 1908, was as follows:

The headblock was razed to one foot above low water level and rebuilt, together with a closefaced crib enlargement 40 by 40 feet on downstream side; the old approach was protected by the addition of a crib ice-breaker, inclined 1½ in 1, the roadway leading to the wharf was also improved.

From the month of July to the end of October, 1914, a long slip 8 feet wide was built along the northwest side of the headblock to provide accommodation to the fishermen. Minor alterations and repairs were also effected.

The work was done by day labour at a cost of $811.

LES EBOULEMENTS.

Les Eboulements is situated in the County of Charlevoix, on the north shore of the River St. Lawrence, 66 miles below Quebec. Population, 2,500.

During the past season, the old unused and dangerous slip on the east face of the wharf was filled; the work involved the construction of approximately 1,500 cubic yards of new crib filled with stone and the tying of same to the old structure. The slip on the western face of the wharf was overhauled and put in good state of repair. The flooring and upper tiers of face timber, longitudinals and cross ties were renewed; 20 fenders and 150 square yards of sheathing were put in position to protect the wharf against the ice; the shed, copings, mooring posts, slip hoist structure and movable slip were painted, the slip hoist machinery was incased; 200 lineal feet of board-walk, 4 feet wide, were put in position and the macadamized part of the wharf was levelled up and repaired. Urgent repairs of damages caused by the storm of November 20, 1914, were also effected.

Work was done by day labour and the expenditure was $5,493.34.

LES ECUREUILS.

The expenditure incurred at Les Ecureuils, Portneuf county, in last fiscal year, for repairs to government wharf, was $774.

On narrow part of wharf the old spruce planking of 3-inch was all removed and renewed, on a length of 82 feet by a width of 20 feet, inside capping. West elevation of outer or head block was sheathed anew on its width of 30·5 feet and height of 19 feet with 3-inch spruce deals.

280 feet of 9 by 9 spruce capping were renewed and painted. Six iron mooring posts (Nigger-heads) were placed at different points on wharf, well and strongly secured with extra strapping, of 3-inch wide, ½-inch thick and 6 feet long flat iron.

Waiting room and freight shed were fully repaired and painted.

LEVIS.

*Dredging.*

Levis is situated in the County of Levis, on the south shore of the River St. Lawrence, opposite Quebec. Population, 7,500.

During the past season, in pursuance of his contract, Mr. Horace Dussault dredged crib sites for foundations of closing wing wall; he also erected and sunk in position Caissons Nos. 6 and 7. The filling behind walls, both stone and earth, was also proceeded with.

Expenditure for fiscal year, $34,323.06.

Mud having accumulated at the entrance to the dry dock to a higher level than that of the top of the sill, dredging was performed over an area of approximately 9,000 square feet; the materials excavated being soft mud and sand, and 1,141 cubic yards, scow measurement, were removed.

The work was performed by the J. L. Lachance Co., between June 3 and 17, 1914, the rate of payment being 65 cents per cubic yard, scow measurement. The total amount paid the contractors was $741.60.

L'ISLET.

The village of L'Islet, in the county of the same name, is situated on the south shore of the St. Lawrence, 50 miles below Quebec. It has a population of 2,500, including village and parish. It is a flourishing agricultural centre. Its trade is considerable and consists in farm produce and lumber. It contains three brickyards, several lumber factories and saw-mills. The village being seated on the bank of the St. Lawrence is very picturesque and somewhat frequented as a summer resort.

Spring tides rise 21 feet; neaps, 13 feet.

The contract entered into on March 11, 1913, for the renewal of the whole superstructure of the wharf and partly executed during the last fiscal year, was resumed and completed during this fiscal year. The superstructure of the wharf is now renewed on its whole length by a height of 12 feet.

At the request of the mariners and business men of that place, who complained that the corners formed by the head block and the main body of the wharf was a nuisance and caused much trouble to vessels, the department decided to fill these corners with cribwork, and on July 18 authority was granted to the contractor to perform the work. It consisted of two triangular blocks of 75 by 61 by 43 feet each side, having a height of 30 feet. These blocks were sunk in the corners and when the structure was at the elevation of 12 feet from the top of the wharf, the whole superstructure of the blocks and the wharf was built as a whole, thus binding the blocks to the main wharf; the cost of the blocks being $5,133.60: 2,852 cubic yards at $1.80 a yard, which is the same as the price per cubic yard for the main contract. The expenditure for the fiscal year is $13,989.10, and the total cost $32,048.60.

### LONG RAPIDS.

Long rapids, in the Lièvre river, in Labelle county, is located on the lower reach, 22 miles above Buckingham.

The departmental dredge *No. 102* worked in the Long rapids channel (July 13-November 11), to complete the improvements made in previous seasons and make the channel safe for navigation.

A cut 725 feet long by 42 wide was made through a portion of the channel which had not before been improved, and the old cut, some 1,900 feet long, was cleaned on an average width of 15 feet; the grade depth throughout is 8 feet; 10,374 yards (scow measure) boulders, gravel and clay were removed.

As during previous operations in this channel, it was necessary last season to employ a crew of men for blasting large boulders which could not otherwise be removed. Expenditure in this connection for labour, explosives, etc., was $1,446.70.

The following is a resumé of previous work: In 1911 departmental drdege *No. 2* made one cut 1,500 feet long by 25 wide, and started a second cut 258 feet long by 25; 1,522 yards (scow measure) boulders and gravel and some 6,725 yards cast-over were removed. In 1912, cuts aggregating 603 feet by 16 wide were made; 801 yards (scow measure) boulders and hardpan were removed. In 1913, 1,637 feet by 25 wide was dredged: 6,965 yards (scow measure) boulders, rock and hardpan were removed.

From recent survey, after dredging, the channel was found in good condition and very little, if any more, dredging will be required.

The corresponding place measure is 6,292 yards and the expansion factor is, therefore, 64 per cent.

### LONGUEUIL.

Longueuil is a post town, in Chambly-Vercheres county, on the south shore of the St. Lawrence, opposite Montreal, on the south line division of the Quebec, Montreal and Southern Railway. It contains 2 churches (Episcopal and Roman Catholic), 8 stores, 7 hotels, 1 saw-mill, one stove factory, 1 branch bank, express and telegraph offices. The town has a drainage system, 2 fine squares and communications with Montreal by train, electric cars and ferry. Population in 1914, 6,000.

During 1914 the department undertook four different dredging improvements, at or near Longueuil.

(*a*) Armstrong-Whitworth.

(*b*) Boating club.

(*c*) Government wharf.

(*d*) Richelieu and Ontario wharf.

*(A) Armstrong-Whitworth.*

The object of this dredging is to facilitate the landing of freight, and the channel will act as a feeder to the company's pump house.

The site of dredging is some 4,000 feet downstream from government wharf, 1,200 feet from shore.

From May 12 to July 3, departmental dredge *No. 123* removed some 13,650 cubic yards, scow measurement, of clay and hard pan in making a 5-foot channel. Hours of actual dredging 221½; cut 45 feet; face 2 to 9 feet; distance advanced 1,970 feet; dumping ground 3 miles downstream on the northwest side of St. Lawrence or below Racine pier. Dimensions of work accomplished, 1 cut 935 feet long by 45 wide, in a northwestern direction. Total number of cubic yards removed, place measurement, is 10,245, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

To complete, as per original project, it will require the removal of 7,342 cubic yards, place measurement, of sand, gravel and hard pan, or 9,789 cubic yards, scow measurement. Dimensions: 1 cut of 1,110 feet long by 40 wide, to a depth of 5 feet below extreme low water.

*(B) Boating Club.*

The object of this dredging is to facilitate the relatively important shipping from the locality, and give a shelter to numerous gasoline yachts and row boats.

The site of dredging is situated immediately upstream of the Richelieu & Ontario wharf, in a small bay, which it forms with the old Grand Trunk Railway wharf. The latter is leased every year to the Longueuil Boating Club.

From August 21 to November 17, departmental dredge *No. 103* removed some 6,073 cubic yards, scow measurement, of clay, gravel, boulders and a small quantity of hard pan, in making a 4-foot basin. Hours of actual dredging, 287½; cut, 12 to 23 feet; face, 1½ to 7 feet; distance advanced, 1,623 feet; dumping ground 4 miles downstream on southwest shore of St. Lawrence, or below Racine pier. Dimensions of work accomplished, 250 feet long, alongside Grand Trunk Railway wharf, by an average of 150 feet wide, to a depth of 6 feet below extreme low water. Total number of cubic yards removed, place measurement, is 4,559 with an expansion factor of 33⅓ per cent for conversion into scow measurement.

To complete, as per original project, will require the removal of 8,496 cubic yards place measurement of clay, gravel, boulders, and hard-pan, or 11,328 yards, scow measurement. Dimensions: 143 feet along shore by 115 feet along wharf, to a depth of 4 feet below extreme low water level.

During 1913, departmental dredge *St. Louis* removed some 495 cubic yards, scow measurement.

*(C) Government Wharf.*

The object of this dredging is to facilitate access to public wharf and basin, and give better landing to boats and barges unloading lumber, sand, stone, etc.

The site of dredging done is at the outer end of the government wharf, going 40° up-stream, and 500 feet inside of outer face of wharf alongside the approach.

From May 23 to June 15, departmental dredge *No. 115*, and from June 16 to November 9, departmental dredge *No. 110* removed some 24,896 cubic yards, scow measurement, of clay, sand and hard-pan in making a 12-foot channel and basin.

Dredge *No. 110* removed 12,045 cubic yards, scow measurement. Hours of actual dredging 143½; cut from 10 to 40 feet wide; face 1 to 4½ feet; distance advanced, 2,508 feet; dumping ground 3 miles down-stream on the north shore of St. Lawrence river, or below Racine pier.

Dredge *No. 115* removed 12,851 cubic yards, scow measurement. Hours of actual dredging, 137; cut from 25 to 50 feet wide; face 6 to 13 feet; distance advanced, 610 feet; dumping ground 3 miles down-stream.

Total distance advanced by dredges *Nos. 110* and *115* is 3,118.

The approximate cubic yards, place measurement, removed by *Nos. 110* and *115* is about 15,000, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

Dimension of the work accomplished: One cut from outer face of government wharf, 40° up-stream, on a length of 540 feet by 25 and 50 wide; and 440 feet from face of wharf, on a length of 160 feet alongside approach of wharf by 200 feet wide; the whole to a depth of 12 feet to 16 feet.

In 1913, departmental dredge *No. 110* removed some 99,267 cubic yards, scow measurement, around Government wharf, in making a 12-foot channel and basin.

To complete as per original project will require the removal of 14,225 cubic yards place measurement, or 18,922 cubic yards scow measurement. Dimensions: cleaning of a basin in front of wharf 280 feet deep by 340 alongside wharf and 650 feet at the outer end.

*(D) Richelieu and Ontario Wharf.*

The object of this dredging was to provide for a new 8½-foot draught boat, which the Richelieu and Ontario Company intends placing on the Montreal-Longueil ferry line, which makes 70 trips daily, loaded with vehicles, double and single automobiles, passengers, etc., from beginning of April to nearly the end of December.

The site of dredging is immediately opposite R. and O. wharf.

From October 6 to November 16, dredge *No. 103*. From July 3 to October 27, dredge *No. 110*. From June 16 to June 24, dredge *No. 115;* and from May 22 to June 15, dredge *No. 116* removed some 73,657 cubic yards, scow measurement, of clay, sand and stones, in completing a 10-foot channel and basin, in front of R. and O. wharf.

Dredge *No. 103* removed 1,753 cubic yards, scow measurement. Hours of actual dredging, 181½; cut 12 to 20 feet wide; face 1 to 6 feet; distance advanced, 2,312 feet; dumping ground 4 miles down-stream northwest of River St. Lawrence or below Racine pier.

Dredge *No. 110* removed 53,055 cubic yards, scow measurement. Hours of actual dredging, 468; cut 30 to 40 feet wide; face 1 to 6 feet; distance advanced, 8,943 feet; dumping ground 4 miles down-stream.

Dredge *No. 115* removed 5,162 cubic yards, scow measurement. Hours of actual dredging, 66½; cut, 25 to 50 feet wide; face 3 to 4 feet; distance advanced, 730 feet; dumping ground 4 miles down-stream.

Dredge *No. 116* removed 13,687 cubic yards, scow measurement. Hours of actual dredging, 166½; cut 40 feet wide; face 2½ to 4 feet; distance advanced, 1,650 feet, dumping ground 4 miles down-stream.

Total distance advanced by the four dredges is 13,635 feet. Total number of cubic yards removed, place measurement, is 55,280, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

Dimensions of work done: cleaning of a shoal, opposite R. and O. wharf on a length of 1,420 feet alongside wharf, and a width of 310 feet opposite down-stream corner of R. and O. wharf, and opposite G. T. wharf a width of 60 feet wide, and for the up-stream portion a width of 350 feet, the whole to a depth from 10 to 24 feet below extreme low water level.

The probable duration of improvements will be 15 years, but numerous boulders and stones may be deposited in the dredged area, every spring, when ice shoves.

During 1913, departmental dredges *Nos. 110* and *116* removed opposite wharf some 34,969 cubic yards, scow measurement.

MAGAUASHA.

Magauasha, in the County of Bonaventure, is situated on the north shore of the Baie des Chaleurs, opposite the town of Dalhousie, N.B., at the entrance of the river of the same name, 12 miles from Carleton by water. The nearest railway station is at Nouvelle, about 7 miles distant.

In 1904-05, a contract was entered into for the construction of a wharf 340 feet in length by 20 wide.

During the present year 1914-15, repairs were made by the renewal of a portion of the planking, stringers and some other minor repairs. Expenditure, $599.24.

MAGOG.

Magog, Stanstead county, is situated at the north end of Lake Memphremagog on the main line of the Canadian Pacific railway, from Montreal to St. John, N.B. It is an incorporated town having a population of about 4,000 which is steadily increasing. The main industry is the Dominion Textile Company, manufacturing cottons and employing over 2,000 hands. The other industries are two saw-mills, one sash and door factory, and one grist-mill. The town possesses its own water system, volunteer fire brigade and electric light plant; the latter a hydro-electric plant on the Magog river giving the town power to dispose of to other industries. It is a custom port of entry. There are three hotels, several stores, weekly newspaper, churches, bank, etc.

The travel by water is extensive, two steamers making round trips daily between Magog and Newport, Vermont, carrying passengers and freight. There are over 500 motor boats, all of which call at Magog more or less frequently. The lake is a favourite summer resort and the accommodation at the different places on the lake is taxed every summer. The permanent residents of the townships of Stanstead, Magog, Bolton and Potton make use of the steamers and launches for passenger traffic and practically all the freight handled in and out of these townships comes over by water from the Government wharfs at Bryant's Landing, Georgeville, Knowlton Landing, and Perkin's Landing and several private wharfs.

On May 22, 1914, authority was received to expend the sum of $1,000 in making repairs to the wharf by day labour.

Work was commenced on June 1st, and carried on intermittingly until September 12, 1914, and consisted in pulling out thirty piles broken by the ice, replacing same by new ones, renewing the floor joists and a part of the flooring broken by the ice and building a small crib for the use of the small boats, 8 by 30 feet.

In the execution of the above works some 8,882 feet b.m. of spruce timber, 6,900 feet b.m. of plank, 5 cords of stone and 660 pounds of iron were used. During the fiscal year 1914-15, the expenditure was $999.94.

MALBAIE.

Malbaie is situate in the County of Charlevoix, on the north shore of the River St. Lawrence, about 83 miles below Quebec. Population, 3,400.

The extension to the wharf at Malbaie was completed this year. This extension consists of a concrete wall, 436 feet long, 24 high at its highest point, 4 feet at the top and 14 feet 10 inches at the bottom, resting on two cribs: the first, 105 feet long, the other, 155 feet long and for the remaining 176 feet, on the natural bed of the river. The cribs are backed with stone and the concrete wall with stone and earth filling and the whole is covered with macadam. The extension is fitted with ladders, mooring rings and mooring posts and provides approximately 1,550 square yards of new wharf area.

Contractor, Napoleon Trudel. Expenditure for fiscal year, is $33,345.75.

*Old Wharf.*

The east corner slip, which was unused and dangerous, was filled; this required approximately 250 cubic yards of cribwork filled with stone which were tied to the old structure. The eastern face of the head-block, which proved to be in bad condition, was renewed; this involved the removal of the stone and subsequent refilling and the tearing off and replacement of approximately 2,000 lineal feet of face timbers, longitudinals, cross-ties and vertical posts. This portion of the head-block was also floored. 15 hardwood fenders and 225 square yards of sheathing were put in position as a protection against the ice; the freight and passenger shed, mooring posts, copings, movable slip and slip hoist structure were painted, and 400 feet of coping laid. The slip hoist machinery was incased.

Work was done by day labour and the expenditure was $3,511.94.

*Dredging.*

In order to provide accommodation for boats of a draft up to 15 feet, dredging was started in the summer of 1913 and proceeded with last summer.

The original proposition involved the removal, over an area of approximately 155,000 square feet, of 48,000 cubic yards, later brought down to 41,000 cubic yards, place measurement, of material; to date, approximately 34,000 cubic yards have been excavated.

Last year, the departmental dredge *Ottawa* excavated, over a total area of approximately 78,000 square feet, 15,700 cubic yards, scow measurement, expansion factor being 23·3 per cent of sand, clay and boulders.

The work was started on 25th July and stopped on 23rd September, the dredge being ordered to new working grounds.

The work should be resumed and brought to completion during the summer of 1915.

MALBAIE.

Malbaie is a municipality situated on the north side of Malbaie bay, some twenty miles south of Gaspe Basin.

A breakwater which will be used as a landing pier was commenced and partly built for a length of 413 feet.

When completed, the work will be 502 feet long, 32 wide on top and about 23 feet high with a depth of about 14 feet at low water.

Expenditure, $27,246.60.

MASSON.

Masson, a village in Labelle county with a population of 1,000, is located on the Ottawa river, 18 miles below Ottawa, and on the C. P. railway, North shore line.

During the summer, a small fire caused damage to the high level landing. A new door on the low level landing shed was placed, and some filling on the high level landing, which had been washed away by rain storms, was replaced. These repairs were made from March 12 to March 22.

Expenditure to March 31, $51.

MEGANTIC.

Megantic, Compton county, is a town of 4,000 people, situated at the north end of Lake Megantic where it empties into the Chaudière river. It is on the main line of the Canadian Pacific railway from Montreal to St. John, N.B., 70 miles from Sherbrooke, and terminus of the Quebec-Megantic line of the Quebec Central railway.

There are 4 hotels, 1 express office, 2 telephone and 2 telegraph lines, good stores, branch banks, etc. There are three saw-mills cutting 14,000,000 feet annually and employing 110 hands in the mills and over 1,000 men working in the lumbering district of the townships of Ditchfield, Spalding, Woburn, Marston, Ditton, Hampden and Winslow which ship to this place. There is also a sash and door factory and a pulp mill. There are about 100 men employed on the railroads having their homes here.

At the last session of Parliament, $5,800 was voted to rebuild a part of the wharf in concrete. Authority was received to expend the amount by day labour.

Work was commenced May 25 and completed on November 12, 1914, and consisted in tearing down the old wharf to the level of extreme low water and building on each side of the approach a concrete wall 6 feet high, making a culvert 20 feet wide with a reinforced concrete flooring, filling the inside of the wharf with stone and gravel, grading with gravel the whole approach and head-block and making a pipe railing.

In the execution of the above work some 16,834 feet b.m. of spruce lumber, 3,042 bags of cement, 1,935 pounds of iron, 8 12-inch steel beams 20 feet long, and 850 feet 7 by 1½-inch iron pipe were used.

During the fiscal year 1914-15, the expenditure was $5,732.55.

MILLE VACHES.

Mille Vaches, Saguenay county on the north side of River St. Lawrence, is situated some 41 miles from the mouth of River Saguenay; it is a farming and lumbering place. Population about 800.

During the fiscal year, the sum of $257.67 was expended to repair the flooring of the old portion of the wharf.

Work started August 8, completed August 26, and was done by day labour.

*Removal of Boulders.*

During the fiscal year, the sum of $500.41 was expended in the removal of boulders in the vicinity of the wharf, which were a danger to navigation.

Work started August 1; completed August 12, and was done by day labour.

MISTOOK.

Mistook, in the township of Delisle, is situated on La Grande Decharge of Lake St. John in the County of Chicoutimi, it is also called St. Cœur de Marie. Population, 1,500.

At the last session of Parliament, the sum of $1,800 was voted for repairs to the wharf, and during the fiscal year, the flooring of the wharf on a length of 400 feet by 20 in width was renewed and raised 17 inches, some stringers were replaced, the freight shed repaired and painted, 2 spaces, 25 feet long 20 feet wide and 25 feet high were filled in with a common round timber structure, ballasted with stone and both sides sheathed with 3-inch deals and one slip on the east side of the wharf was repaired.

Work started August 13, completed September 27, and was done by day labour.

MONTMAGNY.

*Outer Wharf.*

Montmagny, in the county of the same name, is on the south shore of the St. Lawrence, 37 miles below Quebec. It is a thriving town of some 4,500 inhabitants.

Important shipments of lumber are made by the Price Bros. Company and other firms, to European markets. Besides a pulp-mill, there are two foundries and iron works.

To provide a greater surface of flooring and to accommodate the numerous crafts coming to the wharf, it became expedient to extend the outer head of the wharf, and on September 25, 1913, a contract was entered into for the construction of an addition 50 by 50 by 30 feet, for the price of $5,000.

Previous to the laying of the crib foundations, the berth had to be excavated and 1,050 cubic yards of clay were removed.

The construction was started on July 15 and the final estimate was forwarded October 19. The extension consists of close-faced stone-filled cribwork sheathed with hardwood on the north and east faces and placed on the north side of the outer end of the present wharf, and the expenditure amounted to $5,513.91, exclusive of the cost of dredging.

To perform works rendered necessary by the construction of the addition, the sum of $199.47 was expended to build a platform in the angle formed by the addition and the main body of the wharf and for the construction of a rail-guard along the western face of the addition and along the above described platform. Total expenditure during the present fiscal year was $5,713.38.

*East Side of Basin.*

The bottom near the wharf being liable to disturbance during the spring freshets of the River du Sud and rendering the laying along the wharf of vessels at low tides uncomfortable, it was found necessary to build a stranding bed along the western face of the wharf in the rear end of basin.

The ground was excavated three feet and a heavy timber structure secured with ballast was placed on a length of 200 feet by a width of 20 feet, providing a smooth and even surface on which vessels will strand.

The flooring of the wharf consisting of spruce 6 inches thick was repaired and the hill constituting the approach to the wharf was improved.

The work was done in the months of July, August and September, and the expenditure was $2,493.47.

*Protection Wall.*

The continuation of the construction of the protection wall on the east side of the basin was carried out on a length of 712 feet, during the present fiscal year.

This construction consists of a light timber cribwork filled with stone on an average height of 8 feet, the width at the top being 8 feet.

This work is constructed to prevent the disintegration of valuable land and as a consequence, the filling of the basin with the earth carried by the tides.

The whole protection wall is now 2,211 feet and extends from the fall in the rear of the basin to the outside point of same.

The works were carried on during the months of June, July, August and September with an expenditure of $4,499.94.

*Dredging.*

Previous to the laying of the crib foundation for an extension to the wharf, the berth had to be excavated, and authority was granted to rent a clam shell dredge and a tug, to do the work.

The Quebec Harbour Commissioner's dredge *No. 6* attended by tug steamer *Foam*, of John S. Thomm, of Quebec, was used and started the dredging on July 1, completing same on July 18. An area of 3,025 square feet was dredged, the mean depth of the excavation being 8 feet.

The quantity of material removed, consisting of clay, was 1,250 cubic yards (scow measurement), the survey showing a resulting quantity of 1,075 cubic yards, allowing an expansion factor of 20 per cent.

The total expenditure on the work was $1,505.53.

NATASHQUAN.

Natashquan Harbour, Saguenay county, is situated on the north shore of the Gulf of St. Lawrence, about 500 miles below Quebec. Population about 300, all engaged in the fishing industry.

At the last session of Parliament, the sum of $3,000 was voted towards the construction of an addition to the present wharf, and the sum of $2,272.25 was expended in purchasing materials.

NEW RICHMOND.

New Richmond, in Bonaventure county, is situated on the north shore of the Baie des Chaleurs, sixty miles east of Matapedia, between the two rivers Cascapedia.

New Richmond is an important settlement with two saw-mills; farming is also extensive and progressive in this municipality.

A wharf 1,050 feet in length by 24 and 30 feet in width and 13 feet in height was commenced in 1910 and completed in 1912.

Spring tide rises 9 feet; neap tide, 5 feet.

During the fiscal year 1914-15, the work done consisted in the general repairing of the approach to the wharf. Ditches were dug on both sides of the approach to facilitate the escape of water coming down from the hill leading to the approach, after big rains and during spring time when snow melts.

Expenditure, $157.80.

NICOLET.

Nicolet, Nicolet county, is a thriving village on the south shore of the River St. Lawrence at the foot of Lake St. Peter. It is on the line of the Quebec, Montreal and Southern railway and on the branch line of the Intercolonial railway, having good train service in all directions. The population of the town is about 4,000, and of the county, 28,000. A ferry makes daily round trips to Three Rivers, distant about ten miles by water, another steamer running between Montreal and St. Jean de Chaillons calls here twice weekly for freight and passengers, and numerous schooners and barges call here for gravel and stone.

Nicolet wharf consists of a closed-face stone-filled crib, 30 feet wide by 83 feet long, with an ice-breaker having a slope of 1½ in 1 on the upper end; this crib resting on two rows of piles and partly on the ground.

On May 9, 1914, authority was received to expend the sum of $160 for improvements to the wharf, by day labour.

Work was commenced on May 19, 1914, and completed on 26th of the same month, and consisted in building a stone riprap to protect the back filling and sheathing the slip with 2-inch pine plank.

In the execution of the above works, 4½ toise of stone and 700 feet b.m. of pine were used.

During the fiscal year 1914-15, the expenditure was $158.40.

NICOLET JETTY.

At the last session of Parliament, the sum of $4,100 was voted to continue the construction of a new jetty on the east side of the Nicolet river at its outlet. Authority was received to expend this amount by day labour.

Work was commenced on May 27 and completed on July 25, 1914, and consisted in building with stone at the north end of the jetty, an extension 475 feet long, 8 feet wide on top with, on each side, a slope inclined 1 in 1; and at the south end, an extension 50 feet long built in a similar manner as the other part. The finished top being 2 feet above extreme low water level.

In the execution of the above works some 266 toise of field boulders were used.

During the fiscal year 1914-15, the expenditure was $4,090.62.

NICOLET (UPSTREAM WHARF).

At the last session of Parliament an appropriation of $12,000 has been made for the construction of a wharf.

On March 7, 1914, Order in Council was passed authorizing the acceptance of the tender of Mr. Misael Bernatchez, of Montmagny, Que., on a unit price basis entailing an approximate expenditure of $8,911.70.

The work consisted in building a pile substructure, 30 feet wide and 130 feet long, up to the level of extreme low water and a close-faced and stone-filled superstructure, 10 feet high; a stone and earth filling of space between crib and bank, grading of approach and right of way, and a movable warehouse 36 by 12 feet having a steel frame and corrugated roof and sides.

The contract was completed to the satisfaction of the department at the beginning of December, 1914. Expenditure including inspection and price of land, $9,784.90.

On February 24, 1915, authority was received to expend the sum of $2,500 for the construction of a retaining wall to protect the roadway. Of this amount $1,670 was spent in buying the material for this construction.

NOMININGUE.

Nominingue, a village in Labelle county, is a station on the Canadian Pacific railway, 124 miles northwest of Montreal. It is the centre of a farming district with a population of about 600.

During the past winter, a survey was made, plan and estimate prepared for a small wharf to consist of an open-face cribwork landing-head 24 by 32 feet, to draw 5 feet at face, and built to a height of 5 feet above O.L.W.L. and an approach 12 feet wide, 408 feet long, of cribs 12 by 10 feet and platforms 14 feet long.

Access has been provided for a right of way leading to the wharf site, by a registered notarial act, executed by the owner of the property, as long as structure is in existence.

During the month of March, materials, consisting of 53,500 feet board measure timber and lumber, 275 yards stone and 2,600 lbs. drift spikes, were delivered on the ground. It is proposed to proceed with construction during the spring.

Expenditure to March 31, $1,643.49.

NORWAY BAY.

Norway Bay, a small village and summer resort in Pontiac county, is located on the north shore of Chats lake, Ottawa river, opposite Sand Point, Ont.

The wharf, which was considerably damaged by ice shove in the spring, was temporarily repaired in May, at a cost of $14.75. Minor repairs were made to launch landing at a cost of $4.

In October, an agreement was entered into with Captain MacFarlane, of Norway Bay, to remove some 50 yards of stone, which were obstructing navigation, and pile same on shore, for the sum of $30. This has been carried out, and stone is now available for proposed cribwork ice-breaker, which will have to be built next year.

In March, the ice was cut around the wharf and a few minor repairs were made.

Expenditure to March 31, $60.75.

NOTRE DAME DE SALETTE.

La Salette, a village in Labelle County, is located on the each shore of the Riviere du Lievre.

Minor repairs were made to the float landing in July and a new mooring chain bought at a cost of $24.65. An open-face cribwork wharf was built March 3 to 25, consisting of a landing-head 36 by 40 feet, with four landing levels and proper approaches. The wharf extends out 95 feet and draws 7 feet at the landing face. A freight shed 12 by 12 by 8 feet high is placed on shore so as to accommodate freight coming at any stage of water during season.

Expenditure to March 31, $1,456.61.

NOTRE DAME DES SEPT DOULEURS.

Isle Verte or Notre Dame des Sept Douleurs, in the county of Temiscouata, is an island of the St. Lawrence, situated opposite the parish of Isle Verte, on the south shore of the St. Lawrence. Its population is about 600, resorting to farming and fishing for their living. The principal articles of trade are potatoes and fish.

In order to accommodate the inhabitants of the island and render the distance less considerable to reach the wharf, it was found more convenient to build two small wharfs, one at each extremity than to build only one wharf at the centre of the island. The construction of those wharfs was started and the shore sections were built; the one at the lower end of the island being 61 feet long, 20 feet wide at the top with a batter of 1 in 12 and the height 14 feet; the section built at the upper end is 72 feet long at the top and 20 feet at the bottom, the width being 20 feet at the top, with a batter of 1 in 12 and the height 17 feet. These sections are completed with the exception of the flooring which was not laid. The construction consists in a light open-faced stone-filled cribwork.

The works were performed during the months of July and August, with a total expenditure of $1,994.07.

NOTRE DAME DU LAC.

The village of Notre Dame is situated on the west side of Lake Temiscouata, on the Temiscouata railway, about midway between River du Loup and Edmundston, in the County of Temiscouata. It is the centre of an extensive lumber trade; two steamboats and other vessels ply over the lake during the season of navigation. Lake Temiscouata is 30 miles long, the width varies from 1½ to 3 miles. The parish of Notre Dame du Lac extends on both sides of the lake and people, to obtain supplies, are obliged to cross the lake, and this landing is needed for their boats. The population is composed of farmers and lumbermen.

The sum of $972.83 was expended during the first part of the fiscal year, to repair the wharf standing on the east side of the lake, opposite Notre Dame du Lac.

The whole flooring, stringers and cap pieces were renewed, and the spruce sheathing was repaired.

The outer block of the wharf which had settled 1½ feet was raised and levelled. The face timber of the shore end which was decayed has been renewed. Some work was also done to the approach along the lake.

Work was done during the months of August and September.

*West Side.*

In the year 1901, a landing pier was built on the west shore of Lake Temiscouata, opposite the church of Notre Dame du Lac, to provide accommodation to people living on the east shore of the lake. Subsequently, a saw-mill was built at a short distance

from the wharf and the refuses of the mill were burnt quite close to the wharf, with the result that fire was set in the structure and the wharf almost destroyed.

As it was out of the question to repair this wharf in this condition, it was decided to build a new wharf at another location more remote from the saw-mill. Land was acquired by the department from the fabrique of Notre Dame, for the price of $50. Owing to delay in carrying out the transaction, the construction was started only in October and was completed on November 30.

The work consists in a head-block 50 by 30 feet, connected to the shore with a high and low level structure, 85 feet long, 30 feet wide, so that it may be available at all stages of the water, the depth of water available at low water being 11 feet. The hill, which was very steep, was cut and graded so as to provide an incline of about 1 in 5, which is the best slope possible owing to the proximity of the Temiscouata railway track.

The construction is an open-faced round-timber stone-filled cribwork, sheathed with spruce 4 inches thick.

Since the work is started, the mill was destroyed by fire and will not likely be rebuilt. At all events, the municipality of Notre Dame du Lac will not allow the reconstruction of the mill, unless a burner for refuse is provided, as it constitutes a danger for the village itself. The total expenditure is $4,299.48.

NOTRE DAME DU LAUS.

Notre Dame du Laus, a village in Labelle county, is 50 miles above Buckingham, and is the terminus of navigation on the Lievre river.

Owing to boat not having taken her regular trips till late in the summer, the float at Notre Dame du Laus was left high and dry in the spring, and had to be skidded and floated. Originally built in 1908, this float had to be reconstructed June 25 to July 2.

Expenditure to March 31, $155.57.

PAPINEAUVILLE.

Papineauville, a village in Labelle county, is located on the Ottawa river, 38 miles below Ottawa. Population, 1,200.

The departmental dredge No. *106* worked at Papineauville (November 2-17) to provide a slip to the jack-ladder of the Papineauville Lumber Company's saw-mill, improve the approaches to the company's wharf and the public wharf on east side.

An area of some 12,000 square feet was dredged to a grade depth of 62 feet (elevation 122).

2,184 yards (scow measure) of clay was removed. The corresponding place measure quantity is 2,088 yards, and the expansion factor is, therefore, 4·6 per cent.

PASPEBIAC.

Paspebiac, a seaport in Bonaventure county, is situated on the north shore of the Baie des Chaleurs, 85 miles from Campbellton.

It is a station of the Quebec Oriental railway, also an important fishing station, it having been for over a century the headquarters of the great fishing firm of Robin, Jones & Whitman, of the island of Jersey.

It contains 2 churches, 1 telegraph office, 1 hotel, several stores and 2 large establishments.

The population of the village is 1,000, mostly engaged in the fishing industry.

The wharf is 450 feet long by 30 feet wide and 27·5 feet in height; it was built in 1904-05.

Spring tide rises 7½ feet.

The work done during the fiscal year 1914-15 consisted in the renewal of a portion of the planking of the wharf.

Expenditure, $151.99.

*Robin's Wharf.*

This wharf is 550 feet long by 24 and 42 in width and 27 in height; it was built by the Robin's firm, who agreed to transfer it to the Government provided the Department will repair and extend it.

Spring tide rises 7½ feet.

The work done during the fiscal year 1914-15, consisted in the renewal of some planks; and $15.75 which was paid for the transportation of the pile driver and the installation of same.

Expenditure, $114.29.

PERCÉ.

Percé, the county town of Gaspé, is situated on the Gulf of St. Lawrence, 36 miles from Gaspé Basin. The sheathing and fenders on the outside end of the pier for a length of some 150 feet was replaced and materials bought to repair part of the substructure.

Expenditure, $1,025.

PERIBONKA.

Peribonka is situated on the river of the same name, which is a tributary of Lake St. John, in Chicoutimi county, on the north side of the said lake; it is surrounded by important parishes and is connected with Roberval by navigation on the lake.

At the last session of parliament, the sum of $1,000 was voted towards the construction of a dyke and a pontoon at the Pointe Vauvert, River Peribonka, and during the fiscal year $993.50 was expended in the construction of a facine dyke, 200 feet in length by 10 feet in height, and a pontoon 40 feet in length by 15 feet in width and 5 feet in height.

Work started August 5, completed September 25, and was done by day labour.

PETIT SAGUENAY.

Petit Saguenay, Saguenay county, is situated on the south shore of River Saguenay, some 50 miles below Chicoutimi.

Population about 800.

During the fiscal year, the sum of $822.73 was expended in the construction of a freight shed, 18 feet by 20, outside clapboarded, the inside finished in planks one inch thick, shingle roof and the whole painted over with two coats of paint. Big boulders, which were situated in the month of the river, were removed in order to facilitate the entrance for schooners to reach the wharf at high water.

PICHE POINT.

Piche Point, in Pontiac county, on the east shore of Lake Timiskaming, opposite Haileybury, is the landing for Guigues township, the centre of a prosperous farming district with population of 4,000.

Improvements were made to the wharf August 10 to September 8, and consisted of two-ply W. I. pipe handrailing being placed along north side of wooden approach 165 lineal feet; repairs to ice-breaker and shackles placed on piles; extra bracing on some piles in approach; repairs made to riprap wall in stone approach, six stone ballasted round timber cribs 12 by 12 feet were placed around piles along face and

south end of extension of landing-head; the ice boom was stretched at close of navigation, and in March, the ice was cut around the wharf and ice boom.

Expenditure to March 31, $1,501.23.

PIERREVILLE.

Pierreville, Yamaska county, is a thriving village on the eastern side of the River St. Francis, 9 miles from its outlet and 28 miles northwest of Sorel. It is a station on the Quebec, Montreal and Southern railway making connection with Montreal, St. Hyacinthe, Three Rivers and Victoriaville. It contains one R. C. church, two Protestant churches, two banks, insurance offices, one telegraph office, two telephone systems, saw, grist and carding mills, about 15 stores and one sash and door factory. Buckskin gloves, mitts, shoes, baskets and snowshoes are made here in large quantities by a tribe of Abenakis Indians; ship building is also engaged in. The population of the village is about 1,500.

In 1904 and 1905, the Department of Public Works built immediately below the Quebec, Montreal and Southern railway bridge a wharf which consists of:—

1st. A pile wharf 150 feet long, 48 wide and 15 high standing in 5 feet of water with icebreaker inclined 1½ in 1 at its upstream end and double slips along face.

2nd. An earth approach about 400 feet long from 30 to 50 feet wide with rip-rapped slopes properly inclined on both sides.

3rd. A shed for storage purposes erected on stone pillars near the approach.

At the last session of Parliament, the sum of $650 was voted for repairs to the wharf. On May 4, 1914, authority was received to expend this amount by day labour.

Work was commenced on May 23 and completed on July 28, 1914, and consisted in renewing one-third of the flooring, refilling a part of the approach eroded by the high water and rebuilding in concrete a part of the southeast slope of the roadway.

In the execution of the above works, some 5,279 feet, b.m., of spruce lumber, 132 bags of Portland cement and 200 cubic yards of earth were used.

During the fiscal year 1914-15, the expenditure was $656.11.

PIERREVILLE MILLS.

*Dredging.*

Pierreville Mills, or Notre Dame de Pierreville, is a post village of about 400 inhabitants situated on the River St. Francis, three miles above its mouth where it empties into Lake St. Peter. The population of the county is 17,000. The population consists of navigators and ship builders. They own from thirty to thirty-five vessels, having an average length of 110 feet; these boats have to be hauled up in the winter to be repaired for the next season.

The object of the dredging performed was to give the population of the village facilities for hauling and repairing their boats in their own village instead of sending them either to Sorel or Yamaska.

Dredging was performed by departmental dredge *No. 106,* attended by tug *Delisle,* and work was commenced on September 5 and completed on October, 1914, and consisted in 4,686 cubic yards of cast-over, which was then partly removed to prevent its falling back in the cut.

This basin will likely last several years in good condition without being dredged as very little filling in is liable to take place.

The removal of this cast-over was done with scrapers, dumping-carts and wheelbarrows, etc., at a cost of $580.08.

Length of cut, 550 feet with a width of 36 feet at bottom and an average depth of 5½ feet.

Material removed, sand and clay.

POINTE À BROUSSEAU.

Pointe à Brousseau is the western point of the municipality of Chlorydormes, 190 miles below Métis on the St. Lawrence river. The point partly protects a very good fishing harbour except at time of spring tides, and the work under way is to complete the protection of the harbour by building, from Pointe à Brousseau cape, a breakwater over the shoals to the deep-water entrance.

The protection work, started in 1910, was extended in 1911, 425 feet, and a crib 75 by 22 was built up to 2 feet above low water and secured into position. During the course of the summer 1914, a heavy storm demolished the outside end of the protection jetty and lifted and carried ashore part of the crib. During the latter part of the season, the débris was cleaned away, the roadway for a length of 25 feet was rebuilt and the crib rebuilt to the height needed to replace it in position, which could not, however, be done on account of heavy fall gales and the setting in of winter.

Expenditure, $1,985.61.

POINTE À CÔTÉ.

Bic, on the south shore of the St. Lawrence river, in the County of Rimouski, is an important village and favourite summer resort. The harbour offers a natural shelter for vessels of small draught.

Spring tide rises 14 feet, neap tide 6·5.

There are two wharfs at Bic, one called the old wharf, which is located on the south shore of the harbour, and the Pointe à Côté wharf, located at the point of the same name.

The work done during the last fiscal year consisted in the removal of a sand bar obstructing the channel at the mouth of the Pointe river.

Expenditure, $21.25.

POINTE À ELIE.

During the latter part of the fiscal year 1914-15, the head of the wharf, damaged by a mail steamer, and some 44 feet of roadway damaged by a heavy fall storm, were repaired. Two tiers of face timbers had to be removed and replaced, and hardwood sheathing 11 by 5½ had to be secured with two fenders and necessary bracing inside for a length of 43 feet.

The 44 feet of roadway was protected by a timber sheathing and full ballasted.

The total expenditure amounts to $232.22.

POINTE AUX ESQUIMAUX.

Pointe aux Esquimaux, Saguenay county, is situated on the north shore of the Gulf of St. Lawrence, 425 miles from Quebec. Population, 800.

At the last session of Parliament, a sum of $1,800 was voted for repairs to the wharf, and during the fiscal year, the head block, which is 30 feet in width by 100 feet in length, was raised some 3 feet, stringers had to be removed and the flooring replaced.

Work started August 8, completed October 13, and was done by day labour.

Amount expended, $1,312.60.

POINTE AUX TREMBLES.

During last fiscal year, an expenditure of $1,448 was incurred for general repairs to Pointe aux Trembles wharf, County of Portneuf.

The structure having, in winter and spring of 1914, sustained further damage, it was found advisable to suspend operations after October 31, last.

On an area of 9,700 square feet, new 3-inch spruce deals were laid and nailed down over old flooring.

A length of 800 feet of roadway approach, from public highway to wharf, was repaired and covered on a width of 14 feet with some 12 to 18 inches of coarse gravel and sand. Side ditches and drainage outlets were cleaned and some 150 feet of dry stone retaining walls on hilly parts of approach were repaired or rebuilt.

Wire fencing of 54 inches in height was stretched over a length of 471 feet of ground, between adjoining farm and roadway, the wire fencing was secured to 6-inch square cedar posts 8 feet long, placed at every ten feet, well stretched and strongly braced; 2 iron gateways, 12 feet in length, were placed in fencing as per obligations of deed of purchase, for accommodation outlet.

Repairs to building used as combined freight shed, waiting room and light-house, on top, were effected, also to capping and iron guard railing on wharf which was very loose; landing slip was overhauled and large wheelgear of lifting winch was renewed.

### POLTIMORE.

Poltimore, a village in Labelle county, is located on the Rivière du Lièvre, 18 miles above Buckingham, opposite La Salette.

Minor repairs and moving float to a new road outlet on the Liévre river cost $20. Maintenance cost $3, in addition, before Public Works Department tug *Eileen* was put in commission last spring.

Expenditure to March 31, $23.

### PORT-AUX-SAUMONS.

*Dredging.*

Port-aux-Saumons is situate in the County of Charlevoix on the north shore of the River St. Lawrence, about 91 miles below Quebec. Population, approximately, 3,000.

In order to provide a basin for steam barges to be used for the transportation of pulpwood, the dredging of a basin 100 by 600 feet to a depth of 15 feet below low water level, was started last fall. To complete the whole work will involve the removal of approximately 52,000 cubic yards of clay, sand and boulders, over an area of approximately 60,000 square feet.

The departmental dredge *Ottawa* arrived at Port-aux-Saumons on September 24, and left for Quebec on October 10, having dredged, over an area of approximately 16,000 square feet, 8,260 cubic yards, scow measurement, expansion factor being 37 per cent, of boulders, sand and clay.

The work done was mainly the excavation of a safe berth for the dredge.

The work should be resumed and brought to completion during the summer of 1915.

### PORTNEUF.

Portneuf, Saguenay county, is a lumbering village situated on the north shore of River St. Lawrence, some 52 miles from the mouth of Saguenay river. Its population is 800.

At the last session of Parliament, a sum of $1,200 was voted to repair the wharf, and during the fiscal year, the sum of $671.11 was expended in driving piles in front of the wharf on a length of 80 feet. These piles are laid close together and driven into the bottom until refusal.

Work started August 3, completed October 31, and was done by day labour.

POUPORE.

At Poupore, 12 miles above Buckingham, on the Lievre river, in the County of Labelle, the department completed in 1892 a lock and dam, etc., to improve navigation to High Falls.

The work of replacing the old cribwork retaining wall, below the dam, was started June 23. The wall, as completed, is 309 feet long, built to elevation 17·5 feet, stepped up 4 feet over crest of dam and standing 11·5 feet above E.L.W.S. of upper pool. There were 732 yards of concrete laid in the wall.

A cribwork wing dam, to break the cross current at the upper entrance to the locks during high water in the spring, was built across the slough, immediately above the locks. The dam is 295 feet long, built to elevation 8 feet, 8 feet wide at bottom and 4 on top.

The work on the training pier, which was started last winter, when 120 lineal feet were done and 75 per cent of lumber and 70 per cent of iron required were delivered, along with a large quantity of stone ballast, which was hauled, was resumed on December 10 and completed March 27. The training pier, as completed, is 300 feet long, built up 16 feet wide to elevation 5 feet and then from 8 feet wide at elevation 5 to 2 feet wide at elevation 17·0 feet and is sheeted with 3-inch plank. There were 200 yards of gravel hauled on the roads this winter and 250 yards of stone were crushed in preparation for further improvements.

The total expenditure incurred in the two years, 1913-14 and 1914-15, amounts to $20,223.99.

Expenditure during the fiscal year, 1914-15, is $15,214.89.

QUEBEC.

*Dredging.*

Dredging along the National Transcontinental wharf leased to the Allan Steamship Co., was performed with the object of enabling steamers having a draft of up to 30 feet to berth at all points of the tide. This object was not attained as solid rock was met at a depth of 27 feet below low water level at the downstream corner of the wharf.

To bring the original proposition to completion would require blasting; this would not be advisable due to the proximity of the wharf which might be seriously damaged.

3,234 cubic yards, scow measurement, were removed over an area of approximately 13,600 square feet, the excavated material being mud, sand and boulders.

The work was performed by departmental dredges *International* and *Ottawa* in two periods as follows: *International,* from June 1 to June 5, 1914; *Ottawa,* from June 29 to July 28, 1914.

QUYON.

Quyon, a village in Pontiac county on the Waltham branch of the Canadian Pacific railway, is located on the north shore of the Ottawa river near the head of Lake Deschenes. Population, 800.

A contract was entered into with Messrs. T. and J. Moran for the construction of a cribwork wharf on April 14, 1914, for the sum of $7,700, approximately. Construction was started May 5 and completed October 22.

The structure is of open-face cribwork extending out some 362 feet, drawing 9 feet at the landing-face, and built 9 feet above low water level. The landing-head is 64 by 106 feet in dimension and the approach 16 feet wide is 256 feet long. Launch landings are provided in the rear, and the wharf finished with wooden handrailings along the approach, and a freight shed 16 by 24 feet.

Expenditure to March 31, $8,358.71.

*Dredging.*

The departmental dredge *No. 108* worked at Quyon (June 18-August 22) dredging basin at face and along two sides of new wharf to facilitate landing of boats. Dredging was done from contour at elevation 180 about 250 feet out to face of wharf, and on two sides of wharf for a width of some 50 feet all to a grade depth of 9 feet.

10,636 yards (scow measure) clay and sand plus 427 yards old piers were removed. The corresponding place measurement quantity of clay and sand, from surveys before and after dredging, is 6,494, and the expansion factor is, therefore, 64 per cent.

RESTIGOUCHE RIVER.

*Champoux Wharf.*

The Champoux wharf lies in Bonaventure county on the Restigouche river opposite Campbellton.

Dredging is required here every few years to enable shipments of lumber to be made from the Chaleur Bay mills.

Between July 27 and August 29, 1914, the Government dredge *St. Lawrence* or *No. 2* was at work in the berth along the outer face of the wharf dredging an area about 450 feet long by 100 wide to 20 and 23 feet at low water ordinary spring tides, and along the inside face over an area about 200 feet long by 50 wide to 17½ and 20 feet at low water ordinary spring tides.

The material removed amounted to 17,200 cubic yards barge measurement of mud, sand, gravel, etc.

RIGAUD.

Rigaud, a post village and seigniory in Vaudreuil county, on the Riviere a la Graise, 2 miles south of the Quai de Rigaud, a port of call on the Ottawa river. It is a station on the Canadian Pacific Railway (Montreal to Ottawa short line), 16 miles northwest of Vaudreuil, and 41 miles west of Montreal. It is 8 miles east of St. Eugene, Ont., on the same line, and 75 miles east of Ottawa. It is the seat of Bourget college and St. Anne's convent. The sanctuary of Notre Dame de Lourdes, in Rigaud mountain, is in summer season a place of frequent pilgrimages. The village has one Roman Catholic church, 6 stores, 1 foundry, 1 branch bank, saw, grist, carding and fulling mills, besides express and telegraph offices. Population of village, about 800; of parish, 1,050.

The wharf consists of a pile construction 75 feet 4 inches long by 24 feet wide, was completed in February, 1910, with the aid of an indemnity of $1,500 from the Canadian Pacific Railway. This indemnity was obtained on the ground that the construction of a new bridge prohibited boats from reaching the old wharf above the bridge and thus compelled the suspension of local navigation unless a new wharf be built below the bridge site.

During the present fiscal year, improvements were effected as follows:

(*a*) The construction of a crib stone-filled ice-breaker, dimension 25 by 13 feet at base, 12 by 12 at top and 20½ high.

(*b*) The removal of the old freight shed from the wharf, 12 feet west of its former position, on a new foundation.

(*c*) The construction of a cattle yard 30 by 30 feet.

(*d*) The construction, grading and macadamizing of a new approach, on Government property.

(*e*) The raising of the level of the wharf and surrounding ground with stone and gravel, approximately 1 foot above former level.

(*f*) The construction of a new freight shed 35 feet long by 15 wide along the north boundary of the Government property.

This work was performed by day labour at a cost of $2,448.37.

RIMOUSKI.

The town of Rimouski, *chef-lieu* of the county of the same name is situated on the south shore of the St. Lawrence river, 180 miles below Quebec; its population is over 4,000

Rimouski is an important station on the Intercolonial railway, which has a line to and on the wharf, facilitating the import and especially the exportation of lumber, pulp, pulp-wood and sea-grass.

To give an idea of the importance of the lumber trade in the region, the following companies operate: Price Bros. & Co., Ltd.; Price, Porritt Pulp & Paper Co.; Roy & Frere; Turgeon & Vaillancourt; Gagne & Frere; La cie Industrielle; J. A. Theberge; Banville & Cie., etc., all those firms will make use of the wharf for shipping as soon as improvements are completed.

The wharf which is 2,240 feet long by 42 to 52 feet in width constitutes, with the protection of the St. Barnabe island, one of the best harbours in the gulf.

Spring tide rises 14 feet; neap, 8·5.

A contract was entered into with Messrs. Raymond & Talbot, on March 21, 1914, for the construction of a line of cribwork and a tidal basin, at a schedule price.

During the fiscal year 1914-15, the work done consisted in the sinking of two caissons, one of 100 feet in length, the other, 200 feet, both being 31 feet high in 25 feet of water, L.W.S.T.

The dredging necessary for the sinking of these caissons was done to the extent of 100,944 cubic yards, scow measurement.

Expenditure, $50,000.

*Repairs.*

The work done during the last eight months, consisted in the renewing of the Intercolonial Railway track foundation upon a length of about 400 feet; stringers and planking renewed and stone was placed; the head of the wharf, repaired two years ago, was also filled with stone.

Two small piers were built on which were placed the Government shed, store and workshop, to avoid the annual payment of the rental of ground for the said buildings.

Expenditure, $3,491.53.

RIVIÉRE AU RENARD.

Rivière au Renard is one of the most ancient settlements in the County of Gaspé. It is the first important fishing station and business place met with proceeding from Gaspé basin along the south shore up the St. Lawrence. The population is estimated at 1,700.

During the last six months, the outside portion of the Fox river breakwater was rebuilt for a length of 100 feet by a mean height of 20 feet and 32 feet wide giving 3,370 cubic yards of cribwork rebuilt. The old work shoreward of the 100 feet rebuilt, was raised an average of 4 feet for a length of 42 feet giving some 150 cubic yards more of cribwork which would bring the total to 3,500 cubic yards at a cost of $2.60 per yard for work done this season, giving a total expenditure of $7,105.91.

RIVIERE BLANCHE.

Riviere Blanche or St. Ulric, in the County of Rimouski, is situated on the south shore of the St. Lawrence river, 21 miles east of Metis and nine miles west of Matane.

Riviere Blanche is an important farming settlement. There are a big saw-mill and a factory for prepared lumber, doors, sashes, etc.

The wharf and its approach is 446 feet in length by 20 feet in width, built on piers of 20 by 20 feet with a space of 25 feet between and a T-block of 300 feet in length by 25 feet in width.

During the fiscal year 1914-15, the work done consisted in the completion of what was begun last year. The remaining four spans of the wharf which were 25 by 20 have been filled with a round-timber construction fully ballasted and sheathed.

Expenditure, $6,800.02.

RIVIERE DES VASES.

Riviere des Vases in the County of Temiscouata, flows through the parish of Isle Verte and empties into the St. Lawrence, about 6 miles west of the Isle Verte church. It forms part of the parish of Isle Verte, whose population is 2,500. The chief trade of the place is sea-moss industry.

During this fiscal year, the landing pier was extended through a length of 60 feet, consisting in a light open-faced, round timber cribwork, ballasted with stone and top filling of earth.

Previously to the laying of the timber, the bank of the river had to be excavated and some 200 cubic yards of clay were removed. The top of the bank was also levelled and the earth used to fill in the top of the cribwork. The surface was finished with sand, and gravel was added to level the top.

These works were carried on by day labour, and during the months of June, July and August, with an expenditure of $1,499.87.

RIVIERE DU LIEVRE.

The departmental dredge *No. 102* when returning from Long Rapids to Buckingham to go into winter quarters, did a small amount of dredging at two points on the river (Nov. 14-19).

At Devine's point, about 4¾ miles from Buckingham, an old pier was removed, consisting of 180 yards, scow measure, timber, boulders and gravel. At Smith's point, ¾ miles farther down the river, another old pier was removed, consisting of 270 yards (scow measnre) timber, boulders and gravel. This work was required for the improvement of navigation on the river.

RIVER DU LOUP.

Rivere du Loup or the town of Fraserville, is the *chief-lieu* of the County of Temiscouata. It is situated on the south shore of the St. Lawrence, 114 miles below Quebec. It is a thriving town of over 7,000 inhabitants, and contains several manufactories, including two pulp mills. The River du Loup point, where the wharf is located, is distant 2¾ miles from the village. It is one of the best known and most frequented summer resorts of the St. Lawrence. There is a branch of the Intercolonial railway extending from the station to the outer end of the wharf, a distance of 6 miles.

Spring tides rise 19 feet; neaps, 12 feet.

Owing to the heavy wear and tear on the River du Loup wharf, annual repairs are needed. During the present fiscal year the following repairs were made:—

The flooring was renewed on a surface of 6,506 square feet with spruce deals 3 inches thick. On the northeast corner the hardwood sheathing was repaired by placing 4 pieces of oak 11 inches wide, 6 inches thick and 24 feet long. On the outside face, 28 pieces of oak, 6 inches thick, 10 inches wide and 20 feet long were placed to renew the old sheathing worn out. On the southwest corner, two pieces of oak 6 inches thick, 12 inches wide and 34 feet long were also renewed. On the southwest face, the spruce sheathing was repaired in renewing 20 pieces of 24 feet long and 4 inches thick. One mooring post, 18 inches square, was renewed. Some repairs were also made to the railguards on the east side of the wharf.

These works were carried on during the months of August, September and October, with a total expenditure of $1,187.28.

The extreme high tide and heavy storm that occurred in November last have caused some damage to the wharf, the whole planking of the northeast slip was blown away and the movable inside slips were also damaged. A further sum of $58.94 was expended for the repairing of the above mentioned slips, in order that the steamer *Mahone* doing service between Rivere du Loup and the north shore should not be delayed. The total expenditure was $1,246.22.

*Dredging.*

The object of the dredging done during the present fiscal year was to provide a sufficient depth of water to allow the steamer *Mahone* to find a shelter during winter and allow it and the other vessels of same draught to land at the wharf at all times.

The departmental dredge *Progress* started work on June 29, and completed same by 29th July.

Dredging was done over a total area of 176,000 square feet around the head of the wharf, providing a depth of water at low tides of 16 feet on a surface of 111,500 square feet, and a depth of 10 feet on a surface of 64,500 square feet. The mean depth of cut was 3½ feet at the outer end, and 4½ feet along the faces.

The quantity of material removed was 30,854 (scow measurement) cubic yards, consisting of moderately hard clay. The survey has shown a resulting quantity of 30,300 cubic yards, allowing a factor of 30 per cent. The work done is satisfactory, and has much improved conditions near the outer end of the wharf.

RIVER DU MOULIN.

River du Moulin is a new municipality next below Chicoutimi town, its population is about 1,000.

During the fiscal year, the protection work along the back of River du Moulin was continued, and consists in a round timber construction 12 feet at the base, 8 feet at the top and 11 feet high, on a length of 235 feet; 12 feet at the base, 10 feet at the top and 10 feet high for 45 feet in length; 12 feet at the base, 11 feet at the top and 6 feet high for 50 feet in length; 12 feet at the base, 12 feet on top, and 4 feet high for 75 feet in length. The whole ballasted with stone, the outside sheathed with 3-inch deals, and the space between the construction and the road filled in with earth and gravel.

Work started June 18; completed October 6; and was done by day labour.

Amount expended, $5,022.40.

RIVER DU SUD.

The River du Sud flows through the town of Montmagny and empties into the St. Lawernce, with a perpendicular fall of 20 feet. The old protection works existing on the northeast bank of River du Sud in the town of Montmagny, which were the property of A. Bender, were acquired by the department and the land vested in the Crown for the price of $2,000.

These works consisted in a dry stone wall cemented in some parts and having a length of 324 feet.

To render this work more efficient in protecting part of the town of Montmagny from being flooded during spring freshets of the River du Sud, the old wall was rebuilt and extended with the exception of a section 190 feet long which was found still good and was repaired only.

The new part of the wall is 340 feet in length, the mean width being 3 feet, 3 inches at the base tapering to 2 feet at the top, the height being 8 feet. It is built of concrete with proportions of 1:3:6.

The section of the old wall which was not torn down was thoroughly repaired and cemented.

The works were performed during the months of July, August and September with an expenditure of $2,946.26.

RIVER LA PIPE.

River La Pipe is a small village situated on the north shore of Lake St. John, at the mouth of the river of the same name, 7 miles north of La Grande Decharge. Population, about 800.

At the last session of Parliament, the sum of $1,800 was voted to make repairs to the wharf, which is a construction composed of piers 20 feet by 25 feet,, 20 feet apart, and spanned over by stringers and flooring.

During the present year, three of these spaces were filled up with a round timber construction, ballasted with stone and sheathed on both sides with 3-inch deals.

Work started August 17; completed October 31, and was carried out by day labour.

RIVER OUELLE.

The pier is situated at Pointe des Orignaux, 5 miles distant from the village of River Ouelle, in the County of Kamouraska, on the south shore of the St. Lawrence, opposite Murray Bay. A branch of the Intercolonial railway, built from River Ouelle station to the outer end of the wharf, connects with a steamer which crosses the St. Lawrence several times daily during the summer season, calling at Murray Bay and other places on the north shore. In winter, the service is also daily.

The heavy trains coming on the wharf necessitate annual works to be executed and the wharf should be kept in a good state of repair as it is in use during winter and summer.

During the present fiscal year, the following repairs were executed:—

The superstructure from the head of the wharf was renewed on a length of 100 feet by a height of 6 feet on the whole width of the wharf, 30 feet; all the timber and pavements were renewed; the flooring on a surface of 6,000 square feet has also been renewed and 500 feet long of railguards were replaced.

The northeast corner of the outer end of the pier, damaged by ice, was repaired in placing four heavy pieces of oak 12 by 14 inches and 40 feet long, secured to the face timbers with heavy bolts and iron straps. One hundred pieces of sheathing carried away by the ice were replaced. Other minor repairs were also performed.

With a view to protect the northeast corner of the outer end of the wharf against ice, six steel boiler plates, 3 by 12 feet by ¾ inches thick, were bought and paid for.

These works were commenced on July 4 and completed on September 15, at an expenditure of $3,999.14.

RIVER QUINCHIEN.

River Quinchien is a creek draining farm lands from about 1½ miles west of St. Lazare station (on the Montreal-Smiths Falls Canadian Pacific Railway main line) and running east for a distance of 6½ miles into Vaudreuil bay, along the southern border of the village of Vaudreuil.

The object of this dredging was to facilitate the drainage of river and to provide a refuge for motor boats.

The site of dredging done is immediately from a wooden bridge in a northeastern direction, following southeast border of Vaudreuil village to about 75 feet from outer face of Dominion Government wharf.

From May 20 to June 1, departmental dredges *No. 103*, and from June 3 to August 29, *No. 106*, removed some 12,761 cubic yards, scow measurement, of clay and a few boulders in completing a 5-foot channel.

Dredge *No. 103* removed 1,161 cubic yards, scow measurement. Hours of actual dredging, 42; cut, 25 feet wide; face, 4·6 to 6 feet; distance advanced 150 feet, dumping ground, 2½ miles downstream of the entrance of main channel leading to public wharf at Vaudreuil, in Lake of Two Mountains.

Dredge *No. 106* removed 11,600 cubic yards, scow measurement. Hours of actual dredging, 598; cut, 15 to 25 feet wide; face, 2 to 9·2 feet; distance advanced, 1,638 feet, cast-over.

The total distance advanced by dredges *Nos. 103* and *106* is 1,788 feet. The total number of cubic yards sitû removed by dredges *Nos. 103* and *106* is 9,580, having to redredge sliding matèrial at many places, increasing yardage considerably, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

Dimension of work accomplished: one cut from wooden bridge to Government wharf on a length of 860 feet by 25 feet wide average, and from opposite St. Joseph street to wharf on a length of 460 feet by 15 feet wide.

From December 17 to 24, department removed, by day labour, some 340 cubic yard of cast-over left by dredge *No. 106* opposite Amedée Castonguay's shed, on south of cut, on a length of 100 feet alongside channel dredged by 20 feet wide at a cost of $143, or 42½ cents per cubic yard.

## RIVER ST. CHARLES.

On March 17, 1913, a contract was entered into with Messrs. Quinlan and Robertson for the construction of locks and dam at the entrance of the River Saint Charles, in the city of Quebec, for the improvement of navigation. Work contracted for to be finished by March 14, 1916.

The dam will extend across the river from the Louise embankment on the south side, to the highest water line on the north side, parallel to and west of Canadian Northern Quebec Railway bridge. The total length will be 1,590 feet.

The dam construction consists in part of a solid concrete wall 870 feet long and 30 feet high, founded 7 feet below low water spring tides, the upper surface will be above H.W.S.T. Below and within its base there will be driven two parallel lines of interlocked steel piles 25 and 30 feet long respectively. The north end of the dam for a length of 350 feet consists of a line of 25-foot steel interlocked piles, connected to the end of the concrete wall, their upper level being nearly on a level with the top of the dam; these piles will be completely covered, and the wall backed-filled with suitable materials.

Through the dam in the channel of the river there will be two open passages each 65 feet wide leading to the locks, and two sluiceways, each 53 feet wide with suitable gates for regulating the water levels in the pool above the dam.

The sluiceways will be extended to the east end of the locks contained by the north lock wall on one side and a retaining wall on the other.

Concrete piers on each side of these openings which will connect the dam with the lock walls, are arranged to support the future bridge spans that will be required.

The interlocking steel foundation piles will be continued under the sluiceways and piers in line with the dam, thence at right angles under the outer piers to connect with the steel interlocking piles to be driven around the locks to complete the seal below the concrete structure.

The pier and sluiceway foundations will be on the same level as the dam, but in order to support the additional bridge loads a sufficient number of round wooden piles will be driven over the foundations.

The south end of the dam will terminate at the face line of the Louise embankment by a cut-off line of interlocking steel piles connected laterally with all lines traversing the river, and vertically with a concrete wall built up to the level of the main dam.

The river above the dam will be dredged to deposit puddled clay, 4 feet thick, to form a mattress to extend across the river from the cut-off at the south end of the dam to the offset retaining wall, on the north side. The outer line of this mattress will be 150 feet from the centre line of the dam, and under the mattress there will be driven across the river a line of 20 foot interlocking steel piles parallel with the dam.

There will be two locks below the dam with chambers 450 feet long, 65 feet wide and a depth from coping to floor of 43 feet. The thickness of the lock floor will be 15 feet, the base being 35 feet below L.W.S. tides. The lower entrance of the locks will be 691 feet east of the centre line of the dam.

The whole structure will be of concrete with granite copings above H.W.S. tides, the foundations of which will be entirely enclosed by driving interlocked steel piles.

Guide piers will be built at both ends of the locks.

It is the intention to fill as much as possible any available space within the contract limits, that will make useful ground, with materials excavated from the works.

During the year 1913-14, the construction was confined to the dam. Work commenced at the north end by driving a line of 25-foot interlocked steel piles for a length of 350 feet to connect with the end of the concrete dam, the latter was finished for a length of 94 feet, including cofferdams, excavation and driving steel interlocked foundation piles.

During the year 1914-15, the construction was confined to the dam; it included the continuation of the concrete dam for 199 feet from the end of the previous years' work, as far as pier No. 1 at the sluiceway, the completion of the uppeer end of the pier and a short section of the upper revetment wall; and for a height of 14 feet from the foundation level, the concrete in the upper part of the sluiceways and pier No. 2, and the whole length of pier No. 2, and the east end of pier No. 1, including cofferdams, excavation, driving steel interlocked, and wooden bearing piles.

Some pile driving and excavation was done for the upper offset wall, and a length of 225 feet of 20-foot steel piles was driven outwards from that wall on the line across the river, 118 feet from the center line of the dam.

The expenditure for the fiscal year was $136,086.53.

### RIVER ST. LOUIS.

River St. Louis rises between the villages of St. Barbe and St. Stanislas, some 8 miles south of Valleyfield, and running east through the parishes of Cartier, St. Louis de Gonzague, and St. Etienne, flows into Lake St. Louis at Beauharnois some 20 miles from the starting point.

The object of this dredging is to minimize the disastrous floods of each year, during freshets and after heavy rains, by increasing the flowing section of the river and heightening its banks.

From August 10 to November 14, departmental dredge *No. 1* continued the deepening of river bed started in 1904 and continued every year since. Some 2,437 cubic yards, scow measurement, of clay, 442 cubic yards, scow measurement, of gravel and 2,903 cubic yards of solid rock were dredged or blasted making a total of 5,782 cubic yards, scow measurement, deposited on both shores and levelled off. Hours of actual dredging 649, cut 40 feet wide; face 2 feet by 5 feet; distance advanced, 840 feet.

This work necessitated the building of a temporary dam so as to float the dredge, the latter being 40 feet wide.

To date, dredging is completed up to 840 feet above Pont Rouge or 3⅜ miles from starting point at Syman's bridge. To complete dredging up to feeder canal a length of 2½ miles, will take many years to a dredge of *No. 1* type as there is no data on hand as to the quantity of material yet to be removed.

During 1913, dredge *No. 1* took out some 11,000 cubic yards of clay and stone and 2,000 cubic yards of solid rock.

RIVIERE VERTE (WEST SIDE).

Riviere Verte which flows through the parish of Isle Verte, in the County of Temiscouata and empties into the St. Lawrence about ¾ of a mile west of Isle Verte church.

An addition to the landing pier at Riviere Verte west, 125 feet long, 12 feet wide, with a mean height of 6 feet, was built during the fiscal year.

In order to prevent the scouring of the bottom by the current of the river, the crib-work was laid on a facine foundation.

The addition was made in order to give more face for the landing of the numerous boats engaged in the sea-grass industry. The total length of the landing pier is now 607 feet and is found sufficient to meet requirements for the present.

The sum of $125 was used to pay the cost of the required land, and repairs were performed to the sheathing of the old part of the wharf for the sum of $300. Total expenditure was $1,783.86.

ROBERVAL.

The town of Roberval, Chicoutimi county, is the terminus of the Quebec and Lake St. John Railway; it is the shire-town of the county, and the centre of navigation on Lake St. John.

Population 3,000.

During the fiscal year, the road leading to the wharf was macadamized on a length of 305 feet by 20 feet in width, ditches on both sides of the road were dug and 500 square yards of gravel were placed on both sides of the macadam at a cost of $800. The work was carried out by the mayor of the parish who furnished the necessary implements.

In order to straighten up the road, a certain piece of land containing 5,285 square feet was purchased from Madame Delisle-Menard at a cost of $100.

*Wharf.*

During the fiscal year, the wharf had been very badly damaged by fire, and the sum of $1,431.71 was expended in repairs. This work consists in the construction of a small shed, and in the reconstruction of the outside portion of the wharf on a length of 53 feet by 67 feet in width and 13 feet in height at the outer end.

Work started July 8, completed January 30 and was carried out by day labour.

*Breakwater.*

During the fiscal year, the breakwater, which has been under construction for a couple years has been completed.

It is a round timber construction 580 feet in length 24 feet wide at the bottom, 14 feet at the top, and 25 feet high at the outside end.

Work started June 29; completed November 28, and was carried out by day labour.

Amount expended, $6,793.31.

*Dredging.*

The dredging at Roberval was done by the Government dredge, No. 111 *Lac St. Jean.*

Dredging was done in the harbour and in the channel to increase depth at shallow spots.

The work was started on August 28 and continued until November 4.

Some 7,720 cubic yards scow measurement, were dredged. The material was clay with sand.

RUISSEAU A LA LOUTRE.

Ruisseau a la Loutre, a small river in the County of Rimouski, emptying into the St. Lawrence river, about 20 miles below Matane. It forms a cove used as a harbour by the fishermen and for the shipping of lumber to European markets. This lumber is loaded from lighters to ships anchored outside.

It is a new settlement but very progressive and there is an important saw-mill located here.

On 15th of October, 1912, an Order in Council was passed granting the following authorities in connection with the harbour improvements at Ruisseau a la Loutre.

1. To purchase from the Quebec Government the beach lot upon which stands a wharf, for the sum of $50 and to pay $25 for the letters patent of the said lot;

2. To purchase from Francois St. Gelais a wharf and approach at Ruisseau a la Loutre, for the sum of $1,200.

The work done during the fiscal year 1914-15, consisted in the construction of an extension to the wharf, this extension is 100 feet long by 26 feet wide and 22 feet high. The approach has also been widened to 22 feet and completely repaired. Boulders in the vicinity of the wharf have been blasted and removed to facilitate access to the wharf.

Expenditure, $4,958.09.

RUISSEAU A SEM.

Ruisseau a Sem, in the County of Rimouski, about 23 miles below Matane, is situated on the south shore of the St. Lawrence river, where its mouth forms a small cove used as a harbour by fishermen and lumber merchants. Large saw-mills are in operation in the vicinity of Ruisseau a Sem.

Some three or four piers ,which were partly built by this department and partly by Jas. Richardson & Co., and now the property of the department, have been repaired during the fiscal year 1914-15.

The work done consisted especially in the reconstruction of the outside block and one small pier. The block rebuilt is 20 feet long by 30 and 25 feet wide, and the pier is 23 feet long by 12 feet wide, both being 16 feet in height.

Boulders in the vicinity of the wharf were blasted and removed to give barges access to the shore.

Expenditure, $1,495.33.

RUISSEAU JACQUOT HUGUES.

Ruisseau Jacquot Hugues, in the county of Matane, parish of Grosses Roches, is situated on the south shore of the St. Lawrence river, about 15 miles east of Matane.

The mouth of Ruisseau Jacquot Hugues forms a cove, which constitutes a small harbour and a good shelter for the fishing barges.

The work done during the last fiscal year, 1914-15, consisted in the removal of some of the boulders obstructing the entrance to the harbour.

Expenditure, $99.95.

STE. ADELAIDE DE PABOS.

Ste. Adelaide de Pabos, commonly called Little Pabos, is an important parish in the County of Gaspé.

During the course of last summer, 60 feet of approach and the roadway leading to the breakwater were built at a cost of $1,577.68.

ST. ALEXIS.

St. Alexis, Bay des Ha, Ha, Chicoutimi county, is situated on the south shore of the bay, on the Saguenay river, 63 miles from its mouth. Population 1,200.

At last session of Parliament, a sum of $3,500 was voted to repair the wharf, and during the fiscal year, 2,166 lineal feet of cap pieces, 8 inches by 8 inches, were renewed; the flooring and stringers were renewed on a length of 338 feet by 25 feet in width; one mooring post was renewed; 12 ladders were placed on both sides of the wharf, and a new slip 18 feet by 10 feet has been built.

Work started July 1, completed October 31, and was carried out by day labour.

*Dredging.*

On September 4, authority was given to have the departmental plant, *Steam Derrick*, do some dredging at St. Alexis, Ha, Ha, Bay.

The object of the work was to form a basin, 300 feet in length, by 100 feet in width and 6 feet in depth.

This basin is in front of the saw-mill and the endless chain can carry up logs at any stage of tide.

The steam derrick was at work from August 31 to November 2, 2,265 cubic yards, scow measurement, of sand, saw-dust, slab and a few boulders were dredged on an area of about 18,000 square feet and to a depth of 3 feet.

A good deal of refilling has since taken place.

ST. ANDRE.

The village of St. Andre, in the County of Kamouraska, is situated on the south shore of the St. Lawrence, about 15 miles west of Riviere du Loup, and 100 miles below Quebec. The place is somewhat frequented as a summer resort; it contains a foundry and an important factory.

Spring tides rise 19 feet; neaps, 12 feet.

The sum of $287.85 was expended in making urgent repairs to the wharf, which consisted in repairing the flooring on the whole surface of the wharf, and some boulders, interfering badly with navigation, were blasted and the broken pieces taken away.

ST. ANDREWS.

St Andrews, in Argenteuil county, is located on the North river, 3¼ miles from its mouth, where it empties into the Ottawa river.

The departmental dredge *No. 113* and stone lifter *No. 102* worked together in the North River channel from June 30 to September 12, and stone lifter continued alone till October 7, 1913, to facilitate navigation to the public wharf at St. Andrews. Six areas in the channel were dredged. A cut was made in 1913 on the two sides of the wharf. The work in 1914 began 625 feet from the wharf, which was dredged 50 feet wide for a distance of 200 feet and 20 feet wide for a distance of 50 feet; another cut, 2,500 feet from wharf is 750 feet long by from 20 feet to 50 feet wide; a cut 3,450 feet from wharf is 500 feet long by an average width of 25 feet; a cut 4,950 feet from wharf is 200 feet long by 60 feet wide; a cut 5,660 feet from the wharf is some 100 feet long by 50 feet wide; and a cut 7,770 feet from wharf, is 700 feet long by 40 feet wide, all dredged to a grade depth of 10 feet, except in cut 6, which is to 8 feet. Here the improvement was made by the stone lifter working alone, the dredge did not work at this point.

Fourteen thousand six hundred and seventy-nine yards, scow measurement, boulders, gravel ,hardpan, clay and sand were removed September 12. From September 14 to October 7, the stone lifter removed 96 boulders, aggregating 247 yards, making a total yardage removed of 14,926. A large amount of drilling and blasting was necessary to enable the removal of the very large boulders taken out.

The work in 1913 consisted of three cuts at the wharf, aggregating 209 lineal feet by 23 wide, and two cuts 240 feet and 283 feet long by 23 feet averaging 7 feet of cutting in the shoal below the rapids, 4,545 yards, scow measurement, boulders and hardpan were removed.

ST. ANICET.

St. Anicet, a post village and parish in Huntingdon county, near Port Lewis, on Lake St. Francis, an expansion of the St. Lawrence river. The nearest station (10 miles distant), is Whites, on Massena Springs division of the Grand Trunk railway, 31 miles from Massena Spring, and 7½ miles from Huntingdon. It has 1 Roman Catholic church, 1 Protestant church, 8 stores, 2 hotels, grist and saw-mills, telegraph and express offices. Population of parish about 1,645.

The St. Anicet wharf, built in 1862, and added to several times since, consists of:—

1. A close-faced and stone crib head-block, 96 feet long, outside face, 21 feet 5 inches wide at upstream end, and 41 feet 9 inches at other end with shoreward crib extension of 58 feet 9 inches by 34 feet, outer face standing 13 feet 3 inches high in 7 feet 3 inches of water at low level.

2. A stone pier and span approach 173 feet 9 inches by 34 feet;

3. A freight shed 45 feet 3 inches on western shore end of crib extension of head-block;

4. A cattle yard 15 by 15 feet at shore end of approach.

During the months of May and June, 1914, general repairs were made which consisted in the renewal of a part of the flooring and riprap and sidewalk of the approach.

Total expenditure, $305.76.

STE. ANNE DE BEAUPRE.

Ste. Anne de Beaupre is situated in the County of Montmorency, on the north shore of the River St. Lawrence, about 21 miles below Quebec. Population, 3,000.

During the course of the season, the wharf, formerly the property of the estate of Nazaire Simard, was acquired by the Government.

Soundings and borings were taken and a survey of the wharf made in connection with the repairs to be effected during the next working season.

Total expenditure to date under this last item is $297.59.

STE. ANNE DE BELLEVUE.

Ste. Anne de Bellevue, a thriving post village and parish in Jacques-Cartier county, at the confluence of the rivers Ottawa and St. Lawrence, and on the Grand Trunk railway, 21 miles west of Montreal. It contains two churches (Episcopal and Roman Catholic), one convent, one college for the education of Roman Catholic boys and girls, one bank, two telegraph offices, five hotels, seven stores, two carriage factories, the MacDonald College of Agriculture, and is a favourite resort during the summer months. Thomas Moore, the Irish poet, composed the "Canadian Boat Song" in this village, in the house now occupied by the bank of Montreal. Population, 2,000.

The public wharf built in 1883, is composed of:—

1. A crib head-block 120 by 25 feet standing 13 feet high in 5·7 feet of water at low level.

2. A crib and stone approach 75 feet long and from 18 to 12 feet wide leading to St. Peter street.

During the fiscal year, the head-block and approach were totally renewed for a height of seven feet. New mooring post and rings were put in and the approach was macadamized.

This work was done by day labour at a cost of $4,989.63.

*Dredging.*

The object of this dredging is to do away with present channel leading through Baker's dam.

From June 9 to June 27, departmental dredge *No. 13* and from July 20 to November 14 departmental dredge *No. 123* removed some 25,924 cubic yards scow measurement of clay, sand, boulders, hardpan and rock in making a new channel.

Dredge *No. 13* removed 2,625 cubic yards scow measurement. Hours of actual dredging 95; cuts, 45 feet wide; face 1½ to 4 feet, distance advanced 495 feet, dumping grounds within 2 miles downstream on the Ile Perrot side of the river.

Dredge *No. 123* removed 23,299 yards scow measurement. Hours of actual dredging, 723½; cut, 45 feet wide; face, 4 to 8 feet; distance advanced, 2,306 feet; dumping ground within 2 miles.

The total distance advanced by dredges *Nos. 13* and *123* is 2,801 feet. The total number of cubic yards situ removed by dredges *Nos. 13* and *123* is 11,311, of which 2,308 is of rock.

Dimension and site of dredging accomplished: 1 cut 920 feet long 45 feet wide at the downstream extremity of the new channel and upstream of same, 1 cut 1,305 feet long by 45 wide average.

To complete, as originally proposed, will require the removal of a further 21,400 yards situ of rock, or 38,520 yards scow measurement, and 102,350 yards situ of sand, clay, boulders and hardpan.

Dimension of work to be done: a channel extending from upstream end of Baker's dam going downstream on a length of 3,400 feet by 200 wide average, to be deepened to 10 feet below extreme low water level.

STE. ANNE DE CHICOUTIMI.

Ste. Anne, Chicoutimi county, is situated opposite Chicoutimi town, where a ferry boat makes hourly trips; it is an important farming place. Population about 2,000.

During the fiscal year, the sum of $502.52 was expended in urgent repairs to the wharf; these repairs consist in renewing some of the pavings and stringers, also in the caulking and repairing of the pontoon.

Work started August 29, completed March 15, and was carried out by day labour.

STE ANNE DE LA PERADE.

Ste. Anne de la Perade, a post village in Champlain county, is situated at the Ste. Anne river outlet, 30 miles below Trois-Rivieres, on the Canadian Pacific railway. The population is 2,513.

Changes had taken place owing to the Ste. Anne river taking its natural course since the St. Alban landslide, the channel had deepened considerably which has changed a few of the protection works. It was decided to place a riprap between the village and Ile St. Ignace. This work was done by day labour, was commenced September 11, and completed November 21, at a total expenditure of $4,317.03, covering wages and material.

STE. ANNE DES MONTS.

Ste. Anne des Monts is an important municipality fifty-four miles below Matane on the shore of the St. Lawrence river.

During the course of last summer, a landing pier was commenced and built for a length of 850 feet at a cost of $23,436, and materials bought for completion.

When completed, the work will have a total length of 1,525 feet, 22 wide with a depth of about 7 feet at low water.

Spring tides rise 13 feet.

*Jetty.*

During the last six months, 80 feet of superstructure of western jetty was rebuilt at a cost of $2,994.62.

ST. ANTOINE.

St. Antoine, a post village and parish in Vercheres county, on the River Richelieu, and on the Montreal and Sorel railway, 7 miles from Contrecoeur station and 15 miles from St. Hilaire. It contains 1 church, 3 stores, 1 temperance hotel, 1 carriage factory, 1 wood factory, besides telephone service. Population, 1,500.

On January 15, 1913, the department entered into a contract with Mr. Olivier Paul, of Sorel, for the construction of a wharf on a site previously purchased by the Crown from Mr. Jacques Cartier for the sum of $1,200; said contract being for the sum of $9,400.

The work embraced in the contract comprises the construction of a closefaced crib head-block 96 feet long, parallel to current, 32 feet wide and 17 feet high, sunk in 7 feet at low water stage, fully filled with stone and a stone approach 200 feet long and 18 wide at top, having slopes of 1 in 1 at both sides, the top finished with broken stone, sand and gravel.

At the end of last fiscal year, the head-block and part of the approach were constructed.

During May, June, July and October, 1914, the contract was completed, and the wharf opened to the public in October, and in addition, a storehouse 30 by 20 feet, containing a waiting room, was erected by the contractor at the downstream angle of the head-block and approach, supported on piles properly driven, for the sum of $800.

From October last to March 31, the approach was widened 7 feet, a concrete sidewalk 225 feet long by 5 feet wide, was constructed, a pipe railing 200 feet long was placed along the approach and a cattle yard 25 by 12 feet was built.

The work was done at a cost of $3,468.09.

*Dredging.*

The object of this dredging was to facilitate the loading of barges opposite Quintal & Lynch's hay shed.

The site of dredging done is some 1,000 feet downstream of St. Antoine village.

From October 14 to October 16, departmental dredge *No. 119* removed some 899 cubic yards scow measurement of clay in completing a 7-foot landing basin. Hours of actual dredging, 27; cut, 15 to 20 feet wide; face, 6 feet; distance advanced, 202; dumping grounds ¾-mile downstream. Dimensions of work accomplished, 200 feet alongside shore, parallel with hay shed, by 20 feet wide average. The total number of cubic yards situ as determined by soundings which have been taken in January, 1915, is 676 with an expansion factor of 33⅓ per cent for conversion into scow measurement.

ST. ANTOINE STATION.

St. Antoine station is on the Q.M. and S. railway, on the south shore of the River St. Lawrence, 4 miles east of Vercheres and 5 miles west of Contrecoeur. It is also called Pointe Dansereau and forms part of Contrecoeur parish.

A site was chosen on the shore of Cadastral No. 267, in the first concession of the parish of Contrecoeur, for the construction of a wharf consisting of:

1. A crib head-block 50 feet long by 30 wide by 14 feet high, to be sunk in 8 feet of water.

2. A stone approach 215 feet long by 18 wide at the top, with slopes 1 in 1 on each side.

Work was commenced in the beginning of September, 1913, and completed in November of the same year by day labour.

During the present fiscal year, the head-block, which was slightly damaged by ice last spring, was repaired; the stone approach was cemented on both sides, and a six-inch layer of concrete laid on top: a movable storehouse 25 by 18 feet, erected at the southeastern angle of the head-block and approach on proper stone foundation, cemented on sides and top; the right-of-way from the public road to the wharf of a length of 1,750 feet was improved, being rounded, stoned and rolled.

The work was performed by day labour at a cost of $3,442.02.

### ST. CHARLES DE CAPLAN.

St. Charles de Caplan, situated on the north shore of the Baie des Chaleurs, is one of the most important business centres of the County of Bonaventure.

During the fiscal year 1914-15, the work done consisted in the renewing and repairing of a portion of the planking of the wharf.

Expenditure, $100.

### ST. DENIS.

St. Denis, a flourishing post village and parish of St. Hyacinthe county, on the River Richelieu, 18 miles from St. Hillaire station, 6 miles from Contrecoeur, on the South Shore or Quebec-Montreal Southern railway. The village contains 1 Roman Catholic church, 1 convent, 1 hospital, 1 bank, 1 savings bank, 7 stores, 2 hotels, saw, flour and planing mills, 5 butter and cheese factories, 3 carriage factories, 3 furniture factories, cutlery and sash and door factories, 1 tombstone manufactory and 1 bank (Provincial) and telegraph and telephone offices. Population of village and parish, 2,150.

The object of this dredging was to provide an 8-foot channel leading to Government wharf.

The dredging is situated immediately opposite public wharf.

From June 16 to October 13, departmental dredge *No. 119* removed some 15,609 cubic yards, scow measurement, of clay in completing an 8-foot channel and basin. Hours of actual dredging 717½, cut, 22 feet wide; face, 0·3 to 6 feet; distance advanced, 13,601 feet; dumping grounds, 3 miles downstream. Dimensions of the work accomplished: the cleaning of an upstream and downstream channel on a total length of 1,620 by 150 feet wide, the whole to a depth of 8 feet. The total number of cubic yards, place measurement, determined by soundings which were taken on January 15 is 11,716, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

### ST. ELOI.

*Dredging.*

St. Eloi, in the County of Temiscouata lies on the south shore of the St. Lawrence, 17 miles below River du Loup. It has a population of about 1,000 inhabitants, all engaged in farming. The sea grass industry is also much resorted to, the quantity of moss made during last season amounting to over 6,000 tons.

In order to facilitate the landing of boats engaged in that industry, the channel of the River a la Loupe, flowing near the wharf, had to be excavated, thus increasing the depth of water available at high tides.

The hand dredging performed during the present fiscal year consists in the deepening of the channel of the river on a length of 720 feet by a width of 20 feet, and on a mean depth of 3 feet.

The quantity of material removed was 1,600 cubic yards, measured in place, consisting of clay and sand.

The work was carried on between July 4 and August 31, with a total expenditure of $999.37.

STE. EMÉLIE.

During last fiscal year, repairs were made to the wharf at Ste. Emélie de Lotbinière.

Over the land acquired for right of way to the wharf and fronting on the St. Lawrence, a roadway approach was opened and built with embankment protection of open-face cribwork, measuring in width 20 feet by average height of 5 feet and length of 575 feet; timber used being 9, 10 and 11 inches square cedar. The cribwork is filled with 20 toise of stone ballast, 500 loads of sand and coarse gravel, well mixed with clay, hard packed to make a permanent road for traffic, with outlet onto provincial highway at east end, through St. Peter street, in the village of Leclercville; the outside face of crib embankment is sheathed all over with 3-inch spruce deals; all the land purchased or granted to Government has been levelled to height of cribwork; 8 toise of riprap stone have been placed on outside of crib, to protect timbers and guard against wash-outs at high water of spring freshets and moving ice.

The property is enclosed on a length of 471 feet with wire fencing, 52 inches high, secured to cedar posts 6 inches square and 11 feet long (in two lengths joined by screw-bolts) of which five feet are in the ground; the whole with all needed requirements for bracing and solidity.

The grounds will be well drained and kept dry by ditching, dug three feet away from fence; with the ditch are connected three sets of concrete drain pipes, of 12-inch diameter, running across and under roadway at three different points with discharge onto beach, the land being originally low and wet.

In the big ice-shove of 1912, the sheathing on west slope of wharf was broken through and considerably damaged on a length of 100 feet midway, necessitating its renewal on that length and full height of from 16 to 18 feet, with 9-inch thick sawn cedar, using as much of the old iron bolts as could be pulled out and made serviceable at forge.

Some repairs were made to deck timbers of wharf, also to capping where needed, the latter and top sheathing receiving two coats of coal tar; two new 19 foot fenders were placed on outer end of wharf, and other sundry repairs executed.

To accommodate traffic by free access over beach and which was blocked at shore end of wharf on west side for want of passageway, a side inclined slip had to be built inshore abutting onto roadway approach, measuring 30 feet in length by 14 wide, filled with stone ballast and paved with round cedar.

Some 4 toise of stone were placed on east side of wharf to prevent scouring.

STE FAMILLE, I.O.

The Parish of Ste. Famille is situate on the north shore of the island of Orleans, in the County of Montmorency, some 16 miles below Quebec. Population, approximately 1,800.

During the last working season, the wharf was provided with 3-inch spruce sheathing on a length of 130 feet on both sides of the wharf. Some repairs were also effected to the old sheathing on a length of 200 feet on each side of the wharf. Three ladders were renewed and 6 fenders added to protect them. The hardwood fenders of the northeast side of the head-block which had been demolished by the ice were replaced. The waiting room and freight shed was given two coats of paint.

Work was done by day labour, and the expenditure was $1,486.32.

ST. FIDÈLE.

St. Fidèle is situate in the County of Charlevoix, on the north shore of the River St. Lawrence, about 93 miles below Quebec. Population, 1,300.

During the past season, the total floor area, 400 square yards in all, which was in a dangerous state, was levelled and renewed; this involved the addition of 2,300 lineal feet of cross-ties, face timbers, longitudinals and vertical posts. Four hundred and forty lineal feet of coping were placed and painted, together with the mooring posts, and two ladders were repaired. Some little work was also done in levelling the immediate approach to the wharf.

Work was done by day labour, and the expenditure was $2,070.99.

ST. FRANÇOIS DU LAC.

St. François du Lac is the county town of the County of Yamaska, situated on the west side of the River St. Francis, 9 miles above its mouth where it empties into Lake St. Peter. It is a station on the Quebec ,Montreal and Southern railway. The population of the town is 700. It has a post office, two telephone systems, one Roman Catholic church, one convent, three general and three grocery stores, one brick factory, one sash and door and metal cheese basin factory. The registry office for the county is situated here and the sittings of the Circuit Court are held here. Abenakis mineral springs, a very popular health resort, is situated on the river, about 3 miles below St. François du Lac. The surrounding district is rich agriculturally; exports are hay, butter, cheese, cattle, brick and pine timber.

St. François du Lac wharf, built in 1908-1909, consists of:—

1. A pile head-block, 21 feet wide, 142 along outside face, upstream 48 feet of which is 13·2 feet above zero gauge; the remaining 94 feet being at 9 feet 4 inches above low water. Head-block is protected by close-faced crib ice-breaker 30 by 25 feet sunk in 8 feet of water and raising 16·7 feet above zero of gauge.

2. An earth and stone approach, 800 feet long and 30 feet wide.

Authority was received to expend the sum of $85 by day labour.

Work was commenced on May 22, 1914, and carried on intermittingly until February 27, 1915, and consisted in removing from the low level wharf about 50 cubic yards of sand deposited there by the high water, renewing 20 feet long of coping and replacing on the wharf the freight shed which was removed and put in a safe place during the high water. During February, 1915, the freight shed was removed from the wharf for the period of high water.

During the fiscal year 1914-15 the expenditure was $85.

ST. FRANCOIS SUD, I.O.

St. Francois Sud is situate on the south shore of the island of Orleans, in the County of Montmorency, about 25 miles below Quebec. Population approximately, 700.

During the past working season, the surface of the wharf was levelled from the shore to the head-block. 8,495 lineal feet of cross-ties, longitudinals and floor stringers were renewed or added to raise the wharf to its proper level and the coping pieces on each side of the wharf were readjusted accordingly. 1,186 square yards of flooring which were completely worn out have been replaced. 56 square yards of 10 and 6 inch hardwood sheathing were renewed on the face of the head-block. The macadamized part from the shore to the wood flooring has also been repaired. The waiting room and freight shed building, including movable slip hoist, were given two coats of paint. The mooring posts and the coping were given one coat of oil paint. The slip which was damaged by the storm of November 20 was also repaired and put in good order.

Work was done by day labour and the expenditure was $3,465.03.

ST. FRANCOIS NORD, I. O.

St. Francois Nord is situate on the north shore of the island of Orleans, in the County of Montmorency, about 25 miles below Quebec. Population approximately, 700.

During the past season, the front of the wharf was provided with 5-inch hardwood sheathing and the corners protected by 5 10 by 12-inch fenders to afford protection against the action of the ice. 1,148 square yards of 3-inch spruce sheathing were used on either side of the wharf. The slip, flooring and 2 ladders, were repaired; the waiting room, mooring posts and coping were painted.

Work was done by day labour and the expenditure was $1,730.69.

ST. FULGENCE.

St. Fulgence, Chicoutimi county, is a farming and lumbering place of about 1,200 inhabitants, situated some 9 miles below Chicoutimi town on the north shore of River Saguenay.

During the fiscal year, the sum of $247.80 was expended in renewing broken pieces of the pavement, and replacing some stringers on the full length of the whole wharf.

Work started August 24, completed September 1, and was carried out by day labour.

ST. GEDEON.

St. Gedeon, Chicoutimi county, is one of the most important villages of Lake St. John, and is situated on the south shore of the lake, near the mouth of La Petite Decharge. Population, 1,500.

At the last session of Parliament, the sum of $1,500 was voted towards repairs to the wharf, and during the fiscal year, the wharf on a length of 330 feet by 21 feet in width, was repaved with 3-inch deals; the freight shed and waiting room painted over, and one of the spaces between piers at the shore end, 25 feet in length, 25 feet in width and 13 feet in height, was filled in with round timber construction ballasted with stone.

Work started June 22, completed November 11, and was carried out by day labour.

Amount expended, $1,459.54.

ST. GEDEON LES ISLES.

During the fiscal year, the sum of $698.72 was expended in blasting some boulders in the vicinity of the wharf at St. Gedeon les Isles. These boulders were a constant danger for navigation.

Work started April 8, completed March 30, and was carried out by day labour.

STE. GENEVIEVE.

Ste. Genevieve, a post village and parish of Jacques-Cartier county, on Riviere des Prairies, 5 miles from Beaconsfield and 5 miles from Pointe Claire on Grand Trunk railway and Canadian Pacific railway. The village contains one church, one convent, three hotels, one butter and cheese factory, one telegraph office and eight stores. There are excellent mineral springs in the vicinity. Population 729, of parish 1,295.

The Ste. Genevieve approach to the bridge across River des Prairies, built in 1890-91, consists of:

1. A crib and span portion 164 feet 7 inches long, formed of 4 cribs, 26 feet 8 inches long (including ice-breaker) and from 18 feet 5 inches to 20 feet wide sunk from 29 feet 3 inches to 30 feet apart; span formed of steel I-beams.

2. A stone approach 76 feet long and 20 feet wide at top with sides riprapped.

During this year, a sum of $80.73 was expended in making urgent repairs to flooring, work was done by day labour.

STE. GENEVIEVE DE BATISCAN.

Ste. Genevieve de Batiscan is the chef-lieu of the County of Champlain, 25 miles from Trois-Rivieres. Population, 1,847.

As there was a large traffic done between Montreal, surrounding parishes and Ste. Genevieve where merchandise had to lay during several hours on the wharf, it was important to have a freight shed erected. The work was done by day labour and a Pedlar's perfect all-metal shed 36 feet in length and 12 feet in width was erected. This work commenced on September 22, was completed October 8, and cost $329.76.

On account of high water level during the freshets, it was decided to raise the eastern portion of the wharf so as to handle merchandise from the day of the opening of navigation, and during the time the water is at its highest pitch. Thence, the wharf was raised 3 feet on a width of 16 feet on a length of 40 feet, also 25 toise of new riprap and 1,066 cubic yards of earth filling were put in place. This part of the work was done by day labour and cost $1,349.44.

STE GEORGES DE MALBAIE.

St. Georges de Malbaie cove is situated just opposite the St. Georges de Malbaie church in the centre of the parish some six miles northwest of Point St. Pierre and 9 miles southeast of Dougalstown, giving altogether some fifteen miles of coast where fishermen are exposed to north and easterly winds and, in case of storms, have to seek refuge at Gaspé or use such small flats that they can haul their boats high and dry every night.

A breakwater composed of half star-shaped isolated cribs 45 feet long, placed with 20 foot spaces was commenced on October 10, 1911.

During last six months, three cribs were added, to the three cribs previously built, at a cost of $3,297.62.

ST. GODFROY.

St. Godfroy, in the County of Bonaventure, is a flourishing parish, having a population of 2,500, partly engaged in the fishing industry. There is a considerable lumber trade done at this place and farming is progressive.

The wharf built in 1904-05, was repaired during the fiscal year 1914-15. A portion of the planking, some stringers and fenders were renewed; some other minor repairs were also made to the wharf.

Expenditure, $599.64.

ST. GREGOIRE.

St. Gregoire is situate in the County of Quebec, 9 miles below Quebec. Population, 2,500.

An extension to the wharf, 60 feet long by 30 feet wide, of crib-work filled with stone, was erected in order to provide more berthing space for schooners.

Work done by day labour and the expenditure to date is $4,915.

ST. HILAIRE.

St Hilaire, a thriving post village in Rouville county, is on the River Richelieu, 1 mile from St. Hilaire station, 14 miles from St. Hyacinthe, 26 miles from Montreal. It contains 1 Roman Catholic church, 1 convent, 1 academy, 5 stores, 6 door and sash factories, and 1 carding mill Population, 1,462.

For the protection of the shore from spring ice shove and waves from vessels passing in the channel of the Richelieu river, a protection wall was built during the summer months, and consists of a concrete wall 150 feet long by 13 high, 6 feet thick at the base and 17 inches at the top, inside filled with earth to the level of the land.

This work was performed by day labour at a cost of $1,007.06.

ST. IGNACE DE LOYOLA.

St. Ignace de Loyola is a post village and parish in Berthier county, on the St. Lawrence river, close to the western end of Lake St. Peter, and 2½ miles from Berthierville station, on the C. P. railway, and Sorel, on the opposite bank of the St. Lawrence, in Richelieu county. It contains a Roman Catholic church and 1 store. Population of parish, 1,031.

St. Ignace de Loyola East is on the St. Lawrence river, shore of Ile St. Ignace, a quarter mile downstream from the present wharf, which was built by contract in 1907-08, at a cost of $10,800, and consists of:

(a) A pile head-block 60 feet long by 40 feet 4 inches wide at top, with ice-breaker inclined 1½ in 1 on the up-stream side, the top being 12 feet above low water level.

(b) A pile approach 144 feet long by 20 wide at the top, with ice-breaker inclined 1½ in 1 on the up-stream side.

(c) A stone embankment 84 feet long by 20 wide at top, with both sides riprapped and sloped 1½ in 1 and 1 in 1 on the up-stream and down-stream sides respectively.

After serious damages by ice, the pile head-block was rebuilt in 1909 under contract for $2,200. Over a new pile substructure, from low water level, stands a stone-filled crib head-block superstructure 75 feet 11 inches long, 40 feet 1 inch wide, and 7½ feet high above low water. An incline 1 in 10 was also made to connect the old pile approach with the new head-block.

During the fiscal year, repairs were made as follows:

The incline was reduced to 1 in 20, sheathing and stringers of the ice-breaker were renewed, and a new ice-breaker 84 feet long with incline 1½ in 1 was constructed to protect the stone embankment on the up-stream side. The stone embankment was covered with 3-inch flooring as also 1,600 square feet of the wharf.

This work was done by day labour at a cost of $1,500.35.

ST. IRENEE.

St. Irénée is situate in the County of Charlevoix, on the north shore of the River St. Lawrence, about 78 miles below Quebec. Population, 1,800.

Three different kinds of work were undertaken this past season at St. Irenee: The completion of the approach to the wharf, repairs to the wharf proper and a complete survey of the harbour.

*Completion of the Approach to the Wharf.*

In order to level, straighten and put in good condition the approach to the wharf which had been damaged during the fall of 1913, approximately 200 cubic yards of crib-work, with stone filling, were built, together with 200 square yards of flooring. The face of the approach was protected with 120 square yards of sheathing. The area back of the crib-work was filled with earth and gravel, 1,000 cubic yards of material being used for that purpose. The railings were put in position and painted, together with the copings. Urgent repairs of damages caused by the storm of November 20, 1914, were effected.

Expenditure, $2,496.59.

*Repairs to the Wharf Proper.*

The wharf proper, which had sunk an average of 12 inches, was raised and 1,050 square yards of new flooring were laid; this included the renewal and addition of cross-ties, longitudinals, face timbers and floor stringers, and the placing of vertical posts. Six hardwood fenders and hardwood sheathing were replaced at the head-block; 600 lineal feet of coping were put in position; the shed and copings were painted; the slip hoist machinery ineased, and other minor repairs effected.

Urgent repairs to the movable slip and shed damaged by the storm of November 20, 1914, were made.

Expenditure, $3,588.56.

*Survey in connection with the preparation of contract plans.*

In order to prepare plans for the proposed addition to the wharf at St. Irenee, a complete survey of the harbour and the wharf was effected in two periods as follows: From June 10 to June 26, 1914, and July 13 to September 15, 1914

This survey included the taking of numerous soundings and test borings.

Expenditure incurred, $994.16.

All works at St. Irenee were done by day labour.

ST. JEAN, I. O.

St. Jean is situated on the south shore of the island of Orleans, in the County of Montmorency, about 18 miles below Quebec. Population approximately 2,500.

During the past working season, the freight sheds and waiting room buildings were painted and the roof of the old shed repaired. 120 lineal feet of coping, 1,689 lineal feet of longitudinals, cross-ties and floor stringers have been replaced. 852 square yards of flooring, 2 mooring posts and 150 square yards of 3-inch spruce sheathing on the northeast side of the wharf were renewed.

The movable slip hoist, mooring posts and coping were provided with one coat of oil paint. Minor repairs have also been made to the macadam of the approach of the wharf.

Work was done by day labour and the expenditure was $2,246.02.

ST. JEAN DES CHAILLONS.

During last fiscal year, the sliding tendency of the clay hill against which rest and abut part of the present works, was much more pronounced and effective in pushing down and outward, part of construction work of season of 1913, straining and breaking crib-work to such a dangerous point that additional crib-work had to be rushed through to brace up and reinforce what withstood pressure.

The trestle roadway approach having been removed from side wharf onto top of retaining wall, extra crib-work at upper or east end had to be built in 1913 and left at close of season in unfinished shape, although apparently strong enough for eventualities of ordinary occurrences, this work got the worse of the strain. To make a good foundation base, immediately back of original crib of 24 by 29 feet on east end side wharf, an excavation was made down to solid clay onto which was placed an open-face crib measuring 24 feet north and south by 28 feet east and west and 18 feet high, with face timbers of cedar 9 and 10-inch square and 12 by 12-inch stringers, filled up with stone ballast. On top of this crib, over platform, trestle work 24 by 28 feet was put up to receive stringers and planking.

Backward up hill, a second excavation was made in side of hill to solid clay wherein was placed a second crib of 10 by 10-inch cedar, measuring 24 by 28 feet north

and south and east and west and 18 feet high, filled to a height of 9 feet with stone, the elevation facing hill is sheathed. In both excavations about 340 cubic yards of clay and earth were removed.

To secure proper drainage for water coursing down hill, a trench was made on each side of the cribs at from 8 to 12 feet away, and filled up with stone on a sloping base to guard against washouts; some 410 cubic yards of stone were placed in and around work; much more will have to be added this coming season.

The placing of trestle-roadway approach on retaining wall necessitated alterations in upper stand or platform and original block; the trestle being moved 14 feet back, an additional height of open face crib-work, 24 by 28 feet and 7 feet high, was added and covered with 3-inch spruce flooring; this flooring was continued 86 feet further up hill on same width of 28 feet and laid onto 7 rows of 12-inch square cedar stringers properly supported and reinforced. 350 feet of 5 by 5 cedar guards are placed on sides of approaches.

On raised inshore end of wharf and trestle ascent, a strip of the flooring 30 inches wide by 350 feet in length, was doubled over with 3-inch deal ends where traffic is most heavy.

Much work had to be done on hill approach from railway crossing to trestle planking, to cut down heavy grade and provide proper drainage and ditches; 40 loads heavy gravel were spread on road. Temporary repairs, to prevent accidents, were made on wharf and flooring to get over the season; waiting room and shed were repaired and painted, and at close of navigation movable freight shed was hauled ashore, and everything liable to be injured by ice secured.

### ST. JEAN PORT JOLI.

The village of St. Jean Port Joli, in the County of L'Islet, is situated on the south shore of the St. Lawrence river, 60 miles below Quebec.

Spring tides rise 21 feet; neaps, 13 feet.

On the 15th of December, 1913, a contract was entered into for the construction of wharf improvements, consisting of an addition to the wharf, 100 feet in length, 38 feet in width, and a mean height of 30 feet, placed in a straight line with the wharf. It is close-faced, stone-filled crib-work.

The work was commenced on May 1, 1914, and the final estimate was forwarded on 17th November.

The construction of this addition gives more shelter to vessels standing along the wharf, as it is much exposed to north and east winds, nevertheless, the shelter would not be complete unless a breakwater is built to protect the wharf from heavy gales blowing from these quarters. The expenditure on the work was $8,730.13; out of this amount, a sum of $525 was paid for extra sinkage in foundations.

The sum of $287.35 was spent by day labour to repair the old wharf consisting of renewing the flooring, stringers and cap-pieces on a length of 100 feet by the whole width of the wharf.

### ST. JEROME.

St. Jerome, Chicoutimi county, is situated on the west side of Lake St. John. Its population is about 2,000, mostly engaged in farming. It is the most important village of the region.

During the fiscal year, the head-block, built last year and which had settled, was raised some 2 feet on a length of 70 feet by 30 feet in width; the whole portion of the wharf was repaired on a length of 200 feet by 21 feet in width with 3-inch deal; 2 spaces between piers, 25 feet by 25 feet and 15 feet high, were filled in with a round timber structure ballasted with stone, and a freight shed, 24 feet by 30 feet, was built.

Work started August 1, completed March 25, and was carried out by day labour.

Amount voted, $2,500. Amount expended, $2,098.80.

*Dredging.*

On July 28, authority was given to have the departmental dredge No. *111*, Lac St. Jean, do some dredging at the east side of the wharf.

The object of the work was to shelter freight and passenger boats from heavy northwest winds. The area dredged was 11,625 square feet, dredged to a depth of 6 feet below water, summer tide. Some 1,602 cubic yards, scow measurements, have been dredged.

The dredging was started on July 29 and continued until August 22. The materials removed were clay, sand and gravel.

ST. JOSEPH DE SOREL.

St. Joseph de Sorel, a post village and parish in Richelieu county, on the South Shore railway, and on the Richelieu and St. Lawrence rivers at the southwest end of Lake St. Peter, a port of call for the steamers of the Richelieu and Ontario Navigation Company. The village contains the shops of the Department of Marine and Fisheries for the construction and repair of government vessels and barges, employing 700 workmen. It contains also a Roman Catholic church, four stores, two saw and flour mills. Population of parish, 1,800.

The St. Joseph de Sorel public wharf consists of:—

1. A head-block 72 feet 3 inches by 46 feet 2 inches formed of a pile substructure up to 2½ feet above zero gauge and a close-faced crib superstructure, the flooring of which stands 12½ feet above low water level, outside face being in 12 feet of water.

2. A close-faced crib approach from 110 feet 4 inches to 119 feet long and 18 feet wide.

3. A stone approach 74 by 12 feet with sides riprapped and sloped 1 in 1.

On this wharf, during this season, the waiting room and freight shed were repaired. Part of the approach flooring was renewed and the roadway to the approach was raised and graded. This work was done by day labour, at a cost of $880.60.

ST. JUSTIN.

St. Justin is a post village situated in the County of Maskinongé, 9 miles from Louiseville, 33 miles from Trois-Rivière. Population, 3,000.

The "L'Ormière stream" flows through this village, and freshets caused great damages last year by the land slides in the middle of the village.

It was decided to improve this stream and loose stones were thrown across the stream and on the embankment in the form of little core dams, so as to check the current. The work was done by day labour, was commenced July 1, and discontinued August 5. The total expenditure was $1,967.86, covering the wages and material for the construction of four core dams:—

1. Forty feet in length with a slope of 90 degrees.
2. Forty-five feet long with a slope of 1 in 3.
3. Twenty feet long with a slope of 60 degrees.
4. Fifty feet long with a slope of 1 in 3.

Three drains were provided to carry off surface water.

ST. LAMBERT.

St. Lambert, a post town in Chambly-Verchères county, is on the St. Lawrence river and on the Grand Trunk railway, 6 miles from Montreal, and is connected with

it by the Victoria bridge. St. Lambert is a railway junction of the Grand Trunk railway, Intercolonial railway, Quebec, Montreal and Southern and Central Vermont roads. It contains 4 churches (Methodist, Episcopal, Presbyterian and Roman Catholic), 12 stores, 1 lumber mill, 1 branch bank (Toronto), express and telegraph offices, together with an academy and Roman Catholic day school. Population, 3,440.

In 1901, the department constructed a protection dyke 630 feet long with a walk 5 feet wide on the top.

In the months of August and September, 1913, the floor joists and entire flooring of this walk were renewed, by day labour.

At the beginning of the summer, part of this protection dyke was seriously damaged by fire. Authority was granted to have repairs done directly; they were proceeded with by day labour and completed at a cost of $304.47.

ST. LAURENT, I.O.

St. Laurent is situate on the south shore of the island of Orleans, in the County of Montmorency, about 10 miles below Quebec. Population, 2,200.

During the past season, a new light-house having been erected on the wharf by the Department of Marine and Fisheries, the old one was demolished. The freight shed and waiting room building was completely restored and painted and one chimney added. Within the past few years, the head-block with a certain part of the approach of the wharf had sunk over two feet in some places; 3,028 lineal feet of face timber, floor stringers, cross-ties, longitudinals and coping were renewed or added in order to raise the waiting room and freight shed building and the floor of the wharf to its proper level. The northeast side of the approach of the wharf, on a length of 200 feet, which was threatening to collapse, was provided with 4¼-inch iron tie-rods with oak stringers properly bolted on both sides. 1,382 square yards of flooring, 7 mooring posts, 9 fenders and 2 ladders were renewed. 53 square yards of 10-inch rock-elm sheathing were also renewed on the face of the head-block. The movable slip hoist, mooring posts and coping were given one coat of oil paint.

Work done by day labour and the expenditure to date is $4,263.92.

ST. MAJORIQUE.

St. Majorique is a large municipality on the north side of the northwest arm of Gaspe harbour at the mouth of the Dartmouth river.

Approaches and a roadway to the outlet of the Dartmouth river were started from the St. Majorique side towards the main channel in September, 1911.

This work is fully described in the report of 1914.

During the last six months, the work was completed and opened to traffic with the exception of some riprap to be placed along upper face work on the St. Majorique end of work which will have to be raised and strengthened in places.

Expenditure, $8,000.

ST. MARC.

St. Marc, a post village in Chambly-Verchères county, on the Richelieu river, 9 miles from Belœil station, on the Grand Trunk railway, 15 miles from St. Hyacinthe. It contains 1 Roman Catholic church, 3 stores, 1 saw-mill, 2 door and chair factories, etc., besides 1 butter and cheese factory, and a telephone office. Population of the village and parish, 950.

The site of work done is some 3½ miles downstream of the village of St. Marc.

From October 17 to October 20, departmental dredge *No. 119* removed some 406 cubic yards, scow measurement, of clay in completing a 7-foot basin. Hours of actual dredging, 20; cut, 12 to 22 feet; face, 2½ to 6 feet; distance advanced, 127 feet; dump-

ing ground, ½ mile; dimensions of dredging done, 70 feet along shore by 70 feet wide average. The total number of cubic yards, place measurement, removed, determined by soundings, is 305 with an expansion factor of 33⅓ per cent for conversion into scow measurement.

ST. MATHIEU.

*Dredging.*

St. Mathieu, in the County of Rimouski, is situated 4 miles south of the station of St. Simon, and is an important parish with a population of about 1,500. Farming and lumbering are the principal industries of the locality. There are two saw-mills, one of the best butter factories of the district and one butter-box factory.

There are, at St. Mathieu, two lakes separated by a strip of marshy land; the upper or west lake is about 4 miles long and the lower lake 1½ miles. The discharge of the two lakes is what is called River St. Simon, and passes by St. Fabien, near the station of the Intercolonial railway. By dredging between the two lakes and a portion of the river, it will permit of navigation to a depth of 3 feet, sufficient for the driving of logs and timber.

During the fiscal year 1914-15, the work was the completion of the channel commenced during the previous year. Channel between the two lakes for a length of 400 feet by a width of 30 feet to a depth of 4 feet was placed in good condition.

The entrance of the river was cleaned and a portion above and below was scraped. The channel is now 500 feet in length by 35 feet width to a depth of 4 feet.

Amount expended, $997.33.

ST. MAURICE RIVER, GRANDES PILES TO LA TUQUE.

*Dredging.*

The St. Maurice river flows through the Laurentide mountains on a distance of some 350 miles, and empties into the St. Lawrence, near Trois-Rivières.

The deforestation of its drainage area, which is 16,000 square miles, is a cause of the tendency to increase flood and the erosion of its naked shores which are composed of a very erodible material. There is difficulty in maintaining dredging between Grandes Piles and La Tuque, situated from the thirty-second mile to the one hundred and fifth mile from the outlet; this dredging being a matter of direct erosion, and partly of deposition, the navigable portion is directly affected by the water-borne detritus of its headwater and tributaries. The maintenance of this channel consists in cutting bars of alluvial sand formed at curves or where there are prominent enlargements of the river bed.

Dredging was done during the last season by the departmental dredge, Public Works Department, *No. 122*, at the following places:—

At Isle aux Morpions, on the 45th mile from Trois-Rivières, the length of dredging was 884 feet, the width at bottom 40 feet, the average depth of cutting, 2·85 feet, the dredged area, 35,360 square feet, the material encountered, gravel; quantity removed, 3,751 cubic yards; and the work was commenced on July 18, and discontinued July 25.

At Traverse à Ricard, on the 43rd mile, the length of dredging was 1,216 feet; the width at bottom, 40 feet; the average depth of cutting, 3·13 feet; the material encountered, gravel; quantity removed was 5,6·3 cubic yards. The work was started August 5, and discontinued August 19.

At Pointe à Trudel, on the 40th mile, the length of dredging was 2,254 feet, the width 40 feet; the average depth of cutting 3·3 feet, the material encountered gravel and sand, the material removed by scow measurement, 11,470 cubic yards. The dredging was commenced on August 31, and discontinued October 3.

At Ile aux Fraises, on the 40th mile, the length of dredging was 883 feet, the width 40 feet; the average depth of cutting 1·4 feet, the material encountered gravel and sand, the quantity removed 1,756 cubic yards. The work was commenced October 7, and discontinued October 14.

At Pointe à Madeline, on the 39th mile, the length of dredging was 177 feet, the width at bottom 40 feet, the mean depth of cut 5·6 feet, the material encountered sand, the total yardage removed 1,443. This work was commenced on 16th, and completed October 22.

The Laurentide Company, Ltd., an industrial firm located at Grand'Mere, is erecting a dam at this site. After its completion, the back water will cause the discontinuance of dredging in this portion of the river between Grandes Piles and Mackinac river.

The dredging on St. Maurice river was commenced in 1899 and may be summarized as follows:—

| Year. | Total yardage. | Expenditure. |
|---|---|---|
| | | $ cts. |
| 1899 | | 4,359 11 |
| 1900 | | 9,598 29 |
| 1901 | | 6,394 83 |
| 1902 | 11,390 | 8,004 00 |
| 1903 | 13,712 | 7,768 16 |
| 1904 | | 7,953 02 |
| 1905 | 8,771 | 11,240 21 |
| 1906 | | 9,198 08 |
| 1907 | | 15,009 02 |
| 1908 | | 16,146 59 |
| 1909 | 37,317 | 4,236 99 |
| 1910 | | 9,112 79 |
| 1911 | 35,069 | 9,214 43 |
| 1912 | 20,784 | 7,199 69 |
| 1913 | 35,134 | 12,236 08 |
| 1914 | 24,103 | 7,210 92 |

RAPIDS MANIGONCE.

The Rapid Manigonce is situated on the St. Maurice river, 56th mile from the outlet. The object of the work is the maintenance of a 4-foot channel and the straightening of two parts of this channel that are nearly at right angles to each other, by removing big boulders which are an impediment to navigation.

During the last season, boulders were located on a distance of 1,000 feet and a width of 100 feet. The total yardage removed is 148 cubic yards from August 14 to October 8, and deposited on shore 250 feet from the main channel.

It would take from two to three years to complete this work.

This dredging was performed by the departmental stone lifter, *P. W. D. No. 101,* and cost $3,809.01.

During 1913, the stone lifter removed from this site 653 cubic yards of boulders at the cost of $4,485.07.

ST. MICHEL.

St. Michel, in the County of Bellechasse, lies on the south shore of the St. Lawrence, 15 miles below Quebec. The site of the village is picturesque and the place is frequented as a summer resort. The coasting steamer *Champion* calls twice a day, providing good facilities for the shipment of farm produce.

Spring tides rise 21 feet, neaps 13 feet.

During the present fiscal year, the following repairs were performed on the wharf.

The spruce sheathing, 3 inches thick, on the northeast side of the wharf, was renewed on a length of 600 feet by a height varying from 12 to 18 feet.

The sheathing must be kept in a good state on account of the openings of 10 inches between the face timber which would allow the ballast to fall out if not properly sheathed; the slip on the southwest side was almost entirely renewed; four snubbing posts were replaced and some temporary repairs were done to the sheathing on the southwest side; the surface of the head block, 5,600 square feet, was raised and levelled and new stringers, flooring and cap pieces were laid on; the shed standing on the head of the wharf was clapboarded and painted outside and inside; ten iron straps were taken off, repaired and replaced on the northeast and southwest corners, and minor temporary repairs have been done generally.

The works were carried on between June 29 and September 19, at a cost of $1,997.97.

ST. NICHOLAS.

On a length of 253 feet in the narrow part of wharf (23 feet wide), from flooring down to depth of 6 to 7 feet, face timbers on both west and east side elevations were found to be in such a bad condition that they had to be removed and renewed; the two top tiers extending some 20 inches above flooring were guard timbers, commonly called "wheel guards," to protect carts backing over wharf; these two tiers were renewed with 11-inch square spruce, being tougher than cedar; the other tiers down to 7 feet were renewed with square cedar; some cross and longitudinal ties and floor stringers of cedar, found sound in the removal, were put back, and all renewals were of cedar 9 to 12 inches square, spruce measured 11 and 12 inches square.

On a length of 250 feet by 21 feet wide, flooring was renewed with 3-inch good sound 2nds, 3rds and 4ths, spruce deals; the inner or shore end, used for carts and cattle stand on market days, was doubled over with 4-inch pine deals (removed from other parts) after being culled; the area covered was 55 by 45 feet of stand, or 9,900 feet b.m. of pine; on wharf, 15,000 feet b.m. of spruce. The pass or opening at junction of wider inshore end and the 23 feet roadway was planked over with 4-inch cedar deals 18 by 21 feet.

Forty spruce fenders 6 by 9 inches were placed on both east and west side elevations of portion repaired, 20 on each side, in lengths of 10 to 22 feet.

On a length of 145 feet, east side, the whole sheathing from level of flooring all the way down, was renewed with 3-inch spruce deals, and on a length of 160 feet part repairs and part renewals were effected with 3-inch spruce.

The whole outer end face and return corners of head-block, a contour of 134 feet, have been sheathed anew with 6-inch British Columbia pine extending from top of flooring down to 25 feet, well secured with ¾-inch round iron bolts with heads and reinforced with corner straps, 9 on each corner, bent to angles of corners and countersunk their thickness in sheathing; the straps were made of 4-inch flat iron ¾-inch thick and 16 feet long, secured with ¾-inch round iron bolts with heads. Top of sheathing well painted, also capping and posts. Lifting slip was also repaired.

Two buildings were included in purchase of wharf, one a dwelling house of one story and half with high basement cellar for storage, also a large stable of 100 feet long by 24 feet wide, with double row of stalls for accommodation of horses and cattle, while waiting for boat on market days; some necessary repairs, including coal-tarring of roof, were made to stable, while a new flooring in one half the house, used as waiting room, had to be renewed, besides other sundry repairs to doors and windows; two movable freight sheds on wharf were repaired and all three painted, and 150 feet of roadway approach to wharf were graded.

ST. OURS.

St. Ours, an incorporated town in Richelieu county, 2 miles from St. Roch station, on the shore line division of the Quebec, Montreal and Southern railway. It contains a Roman Catholic church, 10 stores, 1 hotel, 1 wagon factory, 1 cheese factory, 1 carriage and plough factory, and 1 sawmill. Population, 900.

The object of this digging was to remove material dumped in 1912-13 by dredge "St. Louis, or No. 121."

The site of work done is 1,500 feet downstream of the town.

From September 13 to 17, the Department removed some 200 cubic yards of clay in cleaning and completing by day labour a foot landing basin opposite Madame Rolland's property. Amount expended, $126, or 62 cents per cubic yard.

Dimensions of work done, 100 feet deep by 20 feet alongside shore.

ST. ROCH DES AULNAIES.

St. Roch des Aulnaies is situated on the south shore of the St. Lawrence, in the County of L'Islet, 70 miles below Quebec.

Between June 5 and September 6, of the last fiscal year, to provide more floor space and accommodate the traffic, an addition to the wharf was constructed, the dimensions were 50 by 21 feet and the height 23 feet, placed on the north side of the outer end of the wharf.

The construction is close-faced crib-work, filled with stone.

The work was carried on by day labour during the months of July, August and September, at an expenditure of $2,672.40.

ST. ROMUALD.

St. Romuald is situate in the County of Lévis, on the south shore of the River St. Lawrence, about 3 miles above Quebec. Population 4,300.

Boulders on the beach, near the wharf, which proved a danger to schooners and made berthing dangerous at low tide, were removed.

Work done by day labour, and the expenditure was $1,499.46.

ST. SIMEON.

St. Simeon is situate in the County of Charlevoix, on the north shore of the River St. Lawrence, about 12 miles below Malbaie. Population, 1,800.

During the past season, a new slip hoist apparatus was bought and installed, the necessary slip hoist machinery also being erected. The west corner of the wharf, which had suffered damages by the ice, was thoroughly repaired, and the land section of the approach, which had been partly emptied by the storm of November 20, 1914, refilled and put back in good condition.

Work was done by day labour, and the expenditure was $1,388.61.

ST. TIMOTHEE.

St. Timothee, a post village in Beauharnois county, on the St. Lawrence river, is situated on the St. Lawrence and Adirondack railway, 5½ miles from Valleyfield. Population of parish, 1,550.

The departmental wharf was constructed partly in 1889 and partly in 1899. It consists of:

1. An approach 250 long by 20 wide, built of stone and earth, covered with gravel.
2. A crib approach 100 by 42 feet, sunk in 7 feet at low water.
3. An outside extension of 100 by 20 feet, built on three cribs 25 by 20 feet each, 20 feet from each other, with outside face 44 feet from the inner block.

In order to ensure greater safety and make a more permanent construction, two close-faced cribs were built and sunk between the existing three cribs, thus forming a solid headblock, stone filled, levelled and macadamized. The riprap along the approach was repaired and the freight shed refloored. This work was performed by day labour at a cost of $1,501.45. This work is now in a good state of repair.

ST. VICTOIRE.

St. Victoire, a post village and parish in Richelieu county, 6 miles from St. Robert station, and 8 miles from Sorel. It contains a Roman Catholic church, 4 stores and 2 flour and saw-mills. Population, 1,532.

A contract for $1,925 was entered with Chas. Papillon and Chas. Gouin, of St. Ours, for the construction of a freight shed 30 by 18 feet, for the extension of the wharf approach by 20 feet, for the grading of the road from highway to the wharf, and for 340 feet of fence along the road and the property purchased for site of wharf.

The work was performed at a cost of $1,997.

SAGUENAY DREDGING.

Chicoutimi town, Chicoutimi county, is situated on the south shore of River Saguenay, at the head of navigation, 71 miles above Tadoussac; it is the terminus of the Lake St. John railway. The Canada Steamship Company maintains a daily service between Quebec and Chicoutimi. Population 8,000.

The object of the work is to provide a channel of 250 feet in width on the tangent and 350 to 500 feet in the curve, with a minimum depth of 16 feet at extreme low water, to allow ocean vessels to come up at any high tide.

During the last fiscal year, the departmental dredge *No. 116, Progress,* removed 45,840 cubic yards, scow measurement. Operations were started on August 6 and continued until October 27. The work consists mostly in dredging lumps and horse-backs, and on that account the supervising of the work has to be done with great care.

There remain some 144,347 cubic yards, scow measurement, to be removed. The material removed is mostly clay with a little sand and a few boulders.

SAULT AU MOUTON.

Sault au Mouton is part of the parish of Mille Vaches, situated on the north shore of River St. Lawrence, some 30 miles below Tadoussac. There is a saw-mill belonging to the Iberville Lumber Company, which employs about 75 families, it is one of the best lumbering places of the north shore.

During the fiscal year, the sum of $764.20 was expended in the removal of boulders in the channel leading to the wharf. These boulders were a great obstruction to lighters employed in loading ocean vessels.

Work started July 20, completed August 25, and was carried out by day labour.

SENNEVILLE.

Senneville is situated at the western, or upstream extremity of the island of Montreal, about one mile north of Ste. Anne de Bellevue, and 21 miles west of the city of Montreal. It faces Lake of Two Mountains, and is an important summer resort, several estates having large properties there.

All the way from below the locks, at Ste. Anne de Bellevue, up to the upstream end of River des Prairies, a distance of about 7 miles, there are no public landing places, on the island of Montreal.

The object of this dredging was to give a shelter harbour to numerous yachts and row-boats.

From June 3 to August 1, departmental dredge *No. 103* removed some 4,136 yards, scow measurement, of clay, sand, boulders and hard pan in completing a 4-foot channel and basin. Hours of actual dredging 337; cut 18 to 25 feet wide; face 1½ to 4 feet; distance advanced 1,797 feet; dumping ground ¾ of mile into a deep basin opposite Maher's property, and 2 miles upstream in Lake of Two Mountains.

Dimensions of dredging done: landing basin, opposite public park, on a length of 310 feet alongside shore, by 200 feet deep, and an entrance channel 440 feet long, by 25 wide average, and the whole to 4 feet below extreme low water. The total number of cubic yards, place measurement, removed, determined by soundings, taken in January, 1915, is 3,104 with an expansion factor of 33⅓ per cent for conversion to scow measurement.

STURGEON BAY.

Sturgeon bay, an extension of the River Richelieu, is situated opposite the upstream end of Ile aux Noix, 5 miles downstream, or north of Lacolle, 13 miles upstream or south of St. Johns.

Ile aux Noix divides the River Richelieu into two channels: eastern and western. The navigable channel passes east of Ile aux Noix, and opposite South river, where it crosses the swift current almost perpendicularly, it then follows the western bank of the Richelieu.

This crossing over is quite a difficult matter to negotiate with a south or north wind, moreover, the South river, especially during spring floods, carries in suspension a large quantity of sediment which is deposited at its mouth over this crossing. The latter has been dredged very often but has always rapidly filled in. It will have to be redredged soon, as at low water it only allows 6-foot navigation.

All along the western shore of Ile aux Noix, there is a natural, shorter and much straighter channel, blocked only by a shoal at its upstream end, opposite Sturgeon bay.

The object of this dredging is to give a further advantage in providing much easier access to government wharf at St. Paul de l'Ile aux Noix, on the western shore of River Richelieu, and would give a better route to some 4,000 barges plying between Lake Champlain, St. Johns and Chambly.

The site of dredging accomplished is some 1,800 feet from upstream end of Ile aux Noix, in a southwestern direction.

From October 27 to November 17, departmental dredge *No. 119* removed some 4,002 cubic yards, scow measurement, of clay, in making a 9-foot channel. Hours of actual dredging 136; cut 22 feet wide.

Face 3 feet to 5 feet; distance advanced 1,911 feet; distance scow tow to dumping ground half mile upstream.

The total number of cubic yards place measurement removed by dredge *No. 119* is 3,003, with an expansion factor 33⅓ per cent for conversion into scow measurement. Dimension of work done: one cut 450 feet long by 50 feet wide average, to a depth of 9 feet below extreme low water level.

To complete a 9-foot channel, as per original project, would call for the removal of 43,311 cubic yards, place measurement of clay, sand and boulders.

TADOUSSAC (ANSE À L'EAU).

Tadoussac is the shire-town of Saguenay county, situated at the mouth of River Saguenay, it is a well known summer resort.

At the last session of Parliament, the sum of $1,500 was voted to make repairs to the wharf, and during the fiscal year, the sum of $1,452.38 was expended in repairs consisting of renewing the sheathing in the outside face of the wharf on a length of 110 feet by 24 feet high; 24 fenders, 8 inches by 10 inches (fir) were also renewed; the old winches, which operated the movable slip, were replaced by Reading chain blocks.

Work started July 8; completed February 10, and was carried out by day labour.

THURSO.

Thurso, a population of 700, in Labelle county, is a station on the Canadian Pacific railway 30 miles east of Ottawa, situated on the north shore of the Ottawa.

A contract was entered into with Alf. Belanger & Co., for the construction of a crib-work wharf on March 14, 1914, for the sum of $12,178.10, approximately. Construction was started March 23 and was completed December 12.

The structure is of open-face cribwork extending out 432 feet, drawing 9 feet at the landing face, and built to a height of 16 feet above low water level. The landing-head, 112 feet by 48 feet, has three landing stages protected by ice-breaker. The high level approach is formed of eleven cribs and eleven spans each 16 feet square, and extending 32 feet to form the roof of low level freight shed. The low level approach, 16 to 40 feet wide, 220 feet long, is built of stone riprap, earth filling and graded to the public highway, a total distance of 400 feet. A high level freight shed is located in the angle of landing-head and approach, and a two-line handrailing is provided where required.

An extra of $90, was authorized for supplying and placing two lines, 18 feet long, of 15-inch concrete pipe and digging outlet canal 1 foot deep to low water line, for drainage under low level earth approach, and on same date an extra of $30 was authorized for the construction of stairway, to connect high level and low level landings, 16 feet long and 4 feet wide, with handrailing. Extra of $169.10 was authorized to widen low level approach 16 feet for a length of 40 feet.

On November 24, 1914, a necessary ice-breaker was authorized to protect freight shed, and the contractors agreed to construct it at the unit prices quoted in contract. The ice-breaker is open-face cribwork sheeted, 8 feet wide, 24 feet long, and on an average height of 8 feet. Expenditure to March 31, $11,657.41.

TROIS PISTOLES.

Trois Pistoles, in the County of Temiscouata, is an important village on the Intercolonial railway, 25 miles below River du Loup. The land in the vicinity is fertile and the place is flourishing. It is somewhat frequented as a summer resort. The population is about 4,000. The amount of shipping through the Intercolonial railway during the year ended January last, was 7,000 tons, consisting of butter, cheese, cattle, hay, grain, potatoes and goods of every description required for the general trade of the place. Shipping by water: Four schooners of 66-30-25-20 tons, making a mean of 3 trips each a month to Quebec and other ports. Amount of freight carried a year 7,500 tons.

A small steamer performs daily service for the mail, between Trois Pistoles and Les Escoumains on the north shore. She carries each season about 30,000 pounds fresh salmon and herring. Owing to the pressure of the ice threatening to upset the breakwater built across the entrance of the harbour at Trois Pistoles, it has been expedient to re-inforce the structure by widening it along the north-east side. During last fiscal year, blocks of 100 feet long were built for that purpose at both extremities of the breakwater. During present fiscal year, the widening of the breakwater was completed by filling with heavy cribwork filled with stone ballast and made with round logs, the space between the two end blocks, 150 feet in length, 20 feet in width and a height of 15 feet. The cribwork was sheathed with spruce 4 inches thick and the top paved with lumber.

The whole structure is now 38 feet wide and has likely the required strength and weight to resist the pressure of the ice.

This work was commenced on 18th May and completed on September 30, by day labour and the expenditure was $5,000.

*Repairs to North Pier.*

The sum of $1,000 was expended in making repairs to the north pier, consisting in renewing three courses of face timber on the east side of the shore end on a length

of 200 feet, and renewing the flooring, stringers and cap pieces on a length of 150 feet by the whole width of the wharf, 18 feet.

These works were performed during the month of August

*Wharf Extension.*

An extension, 90 feet long by 22 feet wide on a height of 16 feet was constructed on the west side of the outer end of the wharf to provide more floor space to accommodate traffic; it was built close-faced with binders along the faces at every 20 feet and filled with stone ballast. The sand which had gathered along the eastern face was removed, giving an additional depth of water of one foot.

The small building standing upon the east side of the wharf and interfering with circulation, was removed and placed upon the addition thereby giving a free floor space for traffic.

The work was commenced on 18th May and completed September 30. It was carried on by day labour at an expenditure of $4,500.

VARENNES.

Varennes is a post village and parish in Verchères county, on the St. Lawrence river, and a station on the Quebec, Montreal and Southern railway, fourteen miles northeast of Montreal. It has one Roman Catholic church and chapel, one convent, one college, branch bank, five stores, one hotel, one planing and three sawmills, two cabinet factories, one foundry, one brickyard, besides express and telegraph offices. Population of parish and village about 2,061.

Every year, during high-water period, the passage of large vessels produce heavy waves, causing erosion along the bank between Varennes and Verchères. At places, slides over 100 feet wide have occurred and the public highway at different places is partially carried away, rendering the passage of vehicles dangerous.

Authority was received to repair three spots where the road was nearly half gone and which were truly dangerous. Accordingly these large gaps of 45 feet, 43 feet and 30 feet, respectively, were filled to a height of from 23 feet to 14 feet at an angle of 32 degrees and covered with the Decauville brick system.

The work was done by day labour, at a cost of $1,674.98.

VERDUN.

Verdun is an incorporated city in Jacques-Cartier county, lying to the southwest of the city of Montreal, and separated from it by the tail-race of the Montreal water works, and 1 mile from St. Paul station on the Grand Trunk railway. It contains four churches, (Roman Catholic, Anglican, Presbyterian and Methodist), seventy-five stores, a large laundry, ice-house, one hotel, one Protestant hospital for the insane, one branch bank and a large seminary. A ferry runs to La Tortue on the south side of St. Lawrence, and there is a good electric car service to Montreal. Population, 29,000.

The new wharf constructed in 1912 consists of:—

1. A close-faced and stone-filled crib headblock, 90 feet long, 40 wide, 13 high, and sunk in 8 feet at low water level.

2. A stone approach 90 feet wide and 30 long at top, riprapped and sloped 1 in 1.

3. A roadway 25 feet wide, raising 1 in 10 to the public road with the river slip, riprapped 1 in 1.

Minor repairs to this wharf were done by day labour at a cost of $75.

*Dredging.*

The Grand Trunk Boating Club is situated on the island of Montreal, opposite Nun's island, some 1½ miles upstream of Victoria bridge.

The object of this dredging is to facilitate access to the Grand Trunk Boating Club's temporary wharfs, and give an entrance channel of 100 feet wide, called the downstream channel, and an upstream channel of 75 feet wide, and the cleaning of several ridges between bank and Price island, in order to give a 5-foot navigable waterway to numerous motor boats and row boats.

From June 17 to November 23, departmental dredge *No. 121* removed some 14,900 cubic yards, scow measurement, of clay and boulders, in making a channel and basin. Hours of actual dredging, 1,020¾; cut, from 15 to 30 feet wide; face, 1 to 8 feet; distance advanced, 7,342 feet; dumping ground, from ½ of a mile to 1 mile in a deep place, close to northeast side of Nun's island.

Dimensions of work accomplished: one channel opposite club house, on a length of 300 feet by 100 wide, from upstream end of same, on a length of 260 feet, alongside Price island by an average width of 75 feet immediately opposite temporary wharf on a length of 250 feet alongside shore by 130 feet wide, and from same wharf 450 feet upstream, a shoal 200 feet long by 200 wide; 1,000 feet upstream from wharf, a shoal 300 feet long, along Price island, by 100 feet average width, the whole to a depth of 6 to 7 feet below extreme low water level.

To complete work, as per original project, will require the removal of 2,720 cubic yards, place measurement, of clay, boulders and hardpan.

Dimensions of work to be done: the cleaning of an upstream channel, on a length of 1,140 by 75 feet wide.

Further dredging was done to facilitate access to the Dominion government wharf, by the ferry boat "St. Louis" plying between here and La Tortue.

The site of dredging is opposite the government wharf.

From May 14 to June 9, departmental dredge *No. 121* removed some 1,665 cubic yards, scow measurement, of clay and stone, in completing a 7-foot channel. Hours of actual dredging 169½, cut 20 to 30 feet wide, face 1½ to 3 feet, distance advanced 1,041 feet, distance scow towed 600 feet in a deep basin, below Government wharf, alongside bank.

The approximate cubic yards removed, place measurement, by dredge *No. 121* is 1,250, with an expansion factor of 33⅓ per cent for conversion into scow measurement.

Dimension of work accomplished: cleaning of seven shoals opposite wharf, leaving a clear passage of 290 feet wide, on a length of 400 feet, the whole to a depth of 7 feet below extreme low water level.

From May 15 to June 19, the department, under day labour, blasted and removed about 50 stones and boulders of an average of one cubic yard each, opposite wharf, at a total expenditure of $349.42.

### VILLE MARIE.

Ville Marie, the seat of the judicial district of Timiskaming, is a village in Pontiac county with a population of 850, and located on the east shore of Lake Timiskaming.

#### *New Dock.*

A contract was entered into with Mr. R. Brewder, March 28, 1913, for the construction of a pilework wharf for the sum of $17,971.93. Work was carried on intermittently during 1913-14, and on the 31st March last was about 70 per cent completed. An extra of $400.62 was authorized May 15, 1913, to provide for an additional length of 24 lineal feet of pilework approach. Other necessary extras, amounting to $432.89, were done, covered by contract. Work was proceeded with by the contractor, and wharf was completed about May 15.

The completed dock consists of a landing-head 145 feet square, drawing 10 feet at minimum R. W. S. (elevation 581), and stands 11 feet above this level, a pilework approach, 32 feet wide, 408 feet long, built to break a short steep grade, and a freight shed 48 by 96 feet with 16-foot walls.

On May 31, a steamer crashed into wharf, doing considerable damage to pile-caps, capping, flooring, braces and fenders and necessitating immediate repairs. This work was done July 6 to 13, at an expenditure of $49.75.

A float landing for launches, 14 feet by 40 feet, with movable stairs, to be moored to rear of wharf, was constructed July 27 to 31, and other minor necessary improvements were made to new wharf at this time.

*Old Wharf.*

In early spring, the new dock was not open for traffic and necessary repairs were made to handrailing and flooring of old wharf. In July and August, owing to extreme low water conditions, boats were unable to land at new wharf, and traffic had to be transferred again to the old wharf, necessitating further repairs to the wharf flooring.

Expenditure to March 31, $4,668.05.

*Dredging.*

The departmental dredge *No. 118* worked in the channel to new wharf at Ville Marie (June 20-July 28), when, owing to low water conditions in Lake Timiskaming, this dredging could not be carried on, and the dredge was removed to other work. The complete work consists of a cut 100 feet wide by 2,500 long; basin in front of wharf 300 feet long by 100 to 256 wide, and cuts on north and south landing faces of wharf 78 feet wide by 144 long, to grade elevation 571.

During season of 1913, 800 feet of outside channel was dredged to 30 feet wide; 300 feet between this cut and the inner basin was dredged to 100 feet wide, and the inner basin was dredged, all to grade elevation 573·5.

In 1914, two cuts 145 feet long by 53 wide were made on north side of dock; one cut some 200 feet long, 35 wide, along face of dock, and a cut 35 feet wide started on the south side but left incomplete on account of low water, dredged to grade elevation 571. The dredge was moved to outer channel some 570 feet from the dock, and from here a cut 35 feet wide was dredged for a distance of 950 feet to grade elevation 571.

Eight thousand nine hundred and fifty-four yards, scow measure, of clay were removed. The place measure quantity, from surveys before and after dredging, removed in two seasons, 1913 and 1914, is 20,409 yards, the scow measure for the two seasons is 15,910 + 8,954 = 24,864 yards, and the expansion factor is, therefore, 21·8 per cent.

It is estimated that to complete all of the proposed improvement will require about six months, or three months each of seasons 1915 and 1916. The yardage for 1915 is 15,000, in scows.

## PROVINCE OF ONTARIO.

### ANCONA.

Ancona is in the County of Victoria, township of Vernlan, on the south shore of the easterly arm of Sturgeon lake, about 1½ miles across the lake from Bobcaygeon.

Authority was given on October 26, 1914, to expend $50 for repairing the wharf by day labour.

Work, which consisted of repairing the stone approach at its junction with the wharf, was commenced on November 24 and completed on November 27.

Total expenditure for fiscal year 1914-15: $28.40.

### ARMITAGE LANDING.

Armitage Landing, in Carleton county, is a landing on the south shore of the Ottawa river, 3 miles from Dunrobin post-office and 1½ miles from Breckenridge, on the Waltham branch of the C. P. railway.

A contract for a cribwork wharf was awarded to Messrs. McCool and Moffat, March 20, 1914, for $10,033.50, at unit prices. Extra work, amounting to $269, was authorized.

Work commenced September 11 and continued up to November 20, 1914, when it was discontinued until work could be carried on from the ice. During this period, earth and stone approach 112 feet long, and timber approach 292 feet long, consisting of eleven 12 by 16 cribs and ten 16-foot spans, were completed, with handrailing.

Work commenced December 19, and the wharf was completed in early spring.

The completed wharf, of open-face crib-work and stone riprap approach, extends out 456 feet, drawing 8 feet at the landing face, and built 8·5 feet above M.L.W.L. (elevation 189). The landing head, 36 by 100 feet, including ice-breaker, consists of three cribwork blocks 16 feet apart and two platforms. The cribwork approach is 308 feet long, and the stone riprap, earth-filled approach 112 feet, all 16 feet wide. A two-line handrailing is built along both sides of approach, a small freight shed, 16 by 24 feet, is located on the landing-head and two ice-breakers, 16 feet square, are located upstream to protect the approach cribs.

Expenditure to March 31, $9,714.18.

### ASH RAPIDS.

Ash Rapids, District of Thunder Bay and Rainy River, is a small rapids connecting the Lake of the Woods and Shoal lake. It is 22 miles southwest from Kenora, the nearest base of supplies. Certain improvements, necessary to navigation, were authorized May 6, 1914, the work to be done by day labour and not to exceed $3,500.

*Dredging.*

The necessary outfit was assembled and camps built, work starting July 27, 1914. The channel was widened, deepened and straightened throughout its entire length, by the removal of solid rock and boulders, leaving a minimum width of 42 feet and an average minimum depth of 8 feet below the summer level of 1914. This work was largely submarine. An old timber wharf was removed, and replaced in better position.

Work was completed October 10, 1914, leaving the channel materially and permanently improved so as to meet all requirements; about 500 cubic yards of rock were removed.

The total expenditure for the fiscal year 1914-15, was $3,267.06.

BAYFIELD.

Bayfield, in the County of Huron at the mouth of the Bayfield river, which empties into Lake Huron, is 10 miles from Clinton and 12 miles from Goderich which are the nearest railway stations on the Grand Trunk railway. The fishing industry is the most prominent business but there is also a profitable enterprise in catering to the summer visitors who are numerous, owning many cottages and a few fine residences. The population is about 600.

Authority was given on May 5 to expend $4,500 on repairing the piers by day labour.

The work consisted of placing new face timbers on the channel side of and general repairs to the decking of the north pier, and the renewal of six rows of face timbers and some of the cross-ties and longitudinals towards the channel side of the south pier for a length of 140 feet, also decking the same portion with 3-inch plank.

Total expenditure for the fiscal year 1914-15 was $4,500.

BAYSVILLE.

Baysville, District of Muskoka, township of McLain, is a village of about 300 inhabitants, situated on the southeastern end of Lake of Bays, at the outlet of the Muskoka river. A dam is built across the river at Baysville, which is used to govern the water for use of lumbermen in handling blocks of logs, also for navigation purposes. The Huntsville and Lake of Bays Navigation Company operate a line of boats, which ply between Huntsville, Lake of Bays and Baysville. There is one large summer hotel in operation at Baysville, numerous hotels on Lake of Bays also many summer cottages.

There are two government wharfs at Baysville, located one on the east side and the other on the west side of the Magnetawan river. The deck planking on these two wharfs required renewing and on October 17, 1914, authority was given to make the desired repairs.

The work was begun December 4, 1914, and completed January 20, 1915.

The materials used in the renewals consisted of 127 pounds of iron and 7,858 feet b.m. lumber.

Expenditure for fiscal year 1914-15 is $422.94.

BEAUMARIS.

Beaumaris, township of Monck, District of Muskoka, is a summer resort, population about 1,000, situated on Tondron island, Lake Muskoka, about 13 miles from Gravenhurst. It is the central distributing point for the Muskoka lakes and 18 to 20 boats call daily during the season of navigation.

There is, at this place, one large summer hotel, accommodating about 300 guests, besides many summer cottages.

On April 24, 1914, an expenditure of $200 was authorized to paint the warehouse, erect a small house for the lighting plant and provide benches for the waiting-room and shelter.

On June 1, 1914, a further sum of $80 was authorized to replace cast-iron pipe, down pipe and to provide globes for outside lamps.

The work was begun April 2, 1914, and completed August 5, 1914.

The material used in these repairs consisted of 78 feet lumber, 6 bunches shingles, 30 feet soil pipe and 8 seats.

Expenditure for fiscal year 1914-15 is $277.58.

BEAVERTON.

Beaverton, in the County of Ontario, on the east shore of Lake Simcoe, has connection with the Grand Trunk and Canadian Northern railways. It is about 72 miles from Toronto and has a population of 2,500.

On 18th November, 1912, a contract was awarded to Mr. D. Conroy amounting to $11,847 for harbour improvements, which consisted in the renewal of the superstructure of the existing breakwater for a length of 845½ feet, in concrete. The wall to have a base 6 feet and a top 4 feet in width; the driving of a line of pile-work 550 feet long parallel and opposite to the said breakwater and the dredging of a channel and approaches to a depth of 9 feet below zero as defined by the hole in the rock at Washago.

Some of the work having been done previously, it was resumed on 1st January and was completed by 30th September, 1914.

Authority was given to pay Mr. Conroy, the contractor, 25 cents per cubic yard for all dredging overcast; and on 9th September, 1913, authority was given to place a handrail on the breakwater at a cost of $450, which work was performed by Messrs. Cameron and Cameron of Beaverton.

The total expenditure for the fiscal year 1914-15, $34,138.12.

BELLE EWART.

Belle Ewart, in the County of Simcoe, on the northwest shore of Cook's bay, a southerly arm of Lake Simcoe, is about a mile from Lefroy, a station on the Grand Trunk railway, 45 miles north of Toronto. It is a popular summer resort, therefore has a transient population, only about 150 people remaining there throughout the year.

Authority was given to expend the sum of $9,200 for the construction of a wharf for which a contract had been awarded to Mr. E. V. H. White for $8,394 on 10th November, 1913.

Work was resumed on 21st January, 1914, and was completed 15th May.

The work consisted in the construction of a wharf of crib-work and spaces having a length of 400 feet and a width of 16 feet connected to the shore by a stone approach 250 feet in length by 16 feet in width on top.

Total expenditure for fiscal year, 1914-15, $1,073.72.

BELLE RIVER.

Belle River is a prosperous village with a population of about 600, situated on the south shore of Lake St. Clair and on the London and Windsor division of the Grand Trunk railway, 93 miles from London and 17 miles from Windsor. It is harbour of refuge for light draught vessels when crossing Lake St. Clair. The traffic at this port consists principally of the importation of sand, gravel, lumber and other building materials. A considerable amount of fishing is done at this port.

The customs collected during the fiscal year 1913-14, amounted to $1,587.15.

At the last session of Parliament, the sum of $1,000 was voted for repairs to sheet piling and authority was received to proceed with the work. Operations were commenced on September 3, 1914, and were completed March 24, 1915.

Between the above dates, the following work was performed:

On west side of harbour: General repairs to waling and capping along sheet piling, the renewal of 3 white oak anchor piles, the construction of one cluster of four white oak piles which were driven and wired with ¾-inch steel cable, and the placing of a considerable quantity of back filling in rear of sheeting.

On east side of harbour: The renewal of 132 feet 4 inches of sheeting 4 inches thick, capped with 10 by 10 timber, the driving of 21 white oak piles 16 feet long and 3 anchor piles, general repairs to tie rods and the placing of a considerable quantity of back filling in rear of sheeting.

In the execution of the above work, approximately, 6,324 feet board measure of lumber, 288 lineal feet of piles, 721 pounds iron and 100 cubic yards back filling were used.

The expenditure during the fiscal year 1914-15 is $1,030.40.

BELLEVILLE.

Belleville, is the county seat of the County of Hastings and is situated at the mouth of the River Moira, which flows into the Bay of Quinte, about 46 miles west of Kingston and 113 miles east of Toronto. It is on the Grand Trunk, Canadian Pacific and Canadian Northern railways, and has a population of 12,000.

On May 6, 1914, authority was given to expend $50,000 for the construction of a wharf and for dredging.

On July 22, 1913, a contract was let to the Randolph-Macdonald Company, amounting to $116,054, for the performance of this work. Some work had been previously done, was resumed on May 4, 1914, and completed by November 20.

The work consisted of the construction of a wharf of cribs and spaces, having 14 cribs, 20 by 30 feet and 14 spaces 20 by 30 feet, with a headblock or L 75 by 100 feet, formed of six cribs; the dredging of a channel and basin to a depth of 12 feet below datum; the removal of an old pier to the same depth, also the construction of a stone approach 210 by 36 feet wide on top from the shore to the inner or northerly end of the wharf.

Authority was given on August 15 to place railway tracks on the concrete work out to the south side of the L at a cost of $1,650, and on November 5, authority was given to place vertical weep holes at 10-foot intervals along the tracks through the decking to cost $22.40 and life chains were placed along the wharf for 1,830 feet at a further cost of $285.

Total expenditure for fiscal year 1914-15, was $78,375.21.

*Dredging.*

Authority was given February 6, 1914, to expend $2,100 in deepening a channel to and the slip between Messrs. Allen's and Holton's docks.

Work was commenced on May 21 and was completed on June 30, 1914.

The work was performed by the Randolph Macdonald Company at a rate of 30 cents per cubic yard, place measurement, for Class "B" material (mud and sawdust) of which there were 1,350 cubic yards, scow measurement, or 905 cubic yards, in situ, from two adjoining areas.

One area, 175 feet by 105 feet, is between the Allen and Holton docks, and the other, triangular in shape, runs from the first area to the channel dredged last year, having a base 105 feet and a perpendicular height of 200 feet. Both these areas were dredged to 12 feet below low water level.

The expenditure for the fiscal year 1914-15, was $419.10.

BENSFORD.

Bensford, in the County of Peterborough, is situated on the Otonabee river, about 14 miles south of Peterborough.

On September 2, 1914, authority was given to expend the sum of $200 by day labour in the construction of a shelter on the wharf, and was commenced September 21 and completed September 30.

The work consisted in the construction of a small shelter on the Government wharf, 12 feet square by 10 feet to the eaves, and having a verandah on one side 5 feet in width.

Total expenditure for fiscal year 1914-15, was $195.79.

BOWMANVILLE.

Bowmanville, formerly known as Port Darlington, in the County of Durham, is situated on Lake Ontario about 49 miles east of Toronto. It is a station on the

Grand Trunk, Canadian Pacific and Canadian Northern railways. There are several extensive manufacturing concerns located at this place such as the Goodyear Rubber Company, the Dominion Piano and Organ Company, etc., etc. Population about 3,500.

On May 6, 1914, authority was given to expend the sum of $12,000 for repairs to the east pier.

Contract plans and specifications were duly prepared and forwarded but it was decided to leave the matter in abeyance for the present as negotiations are pending for the purchase of this harbour by the Crown.

On July 25, last, the expenditure of $2,000 was authorized for repairs to the east pier by day labour and work was commenced August 22 and completed October 5.

The work consisted in renewing the decking where required, placing several new face timbers, cross-ties and stringers on the channel side, also the construction of a new crib filled with stone to form part of the southerly portion of the east pier 12 feet by 12 feet by 6 feet.

Total expenditure for fiscal year, 1914-15, was $1,446.41.

On June 12, 1914, authority was given to have the departmental dredge *No. 105*, remove an estimated quantity of 47,600 cubic yards from the entrance to and between the piers at Bowmanville.

The work was commenced on September 8 and was completed by November 18, 1914. It consisted of making a cut 250 feet by 50 feet at the entrance to and a cut 1,350 feet by 50 feet between the piers, with an addition of a second cut 60 feet by 20 feet started between the piers on the west side near the inner end; all to the depth of 16 feet below low water.

In doing the above work, 25,844 cubic yards, scow measurement, or 18,100 cubic yards, place measurement, of class B material (sand and clay) were removed.

A channel 30 feet wide was dredged in 1913, parallel to this year's cut and next to the east pier, and it is proposed to still dredge another cut, 20 feet wide on the westerly side; finally making a channel 100 feet wide between the piers, as well as an entrance channel 300 feet wide at 300 feet out from the end of the piers.

The work performed between the piers will likely last for years, but the entrance will fill in with drifting sand from time to time; depending largely upon the frequency and violence of the storms.

### BRACEBRIDGE.

Bracebridge, township of Macauley, District of Muskoka, is a town of 3,500 inhabitants, situated on the north branch of the Muskoka river, 5 miles above its discharge into Muskoka lake. It is also the chief town of the district; the registry office and courts are situated here. The North Bay branch of the Grand Trunk railway passes through the town.

Bracebridge corporation own three large hydro-electric plants generating approximately 2,000 H.P. and are developing a fourth power of several hundred H.P. at High Falls farther up the river.

The industries consist of two large tanneries, two planing mills, one woolen mill, saw-mills and some minor manufacturies, all of which procure their power from the municipal plants.

The Muskoka Navigation Company operate a line of boats and their steamers call regularly twice a day during the season of navigation. In addition, there are a large number of pleasure launches and supply boats operating during the navigable season.

Building operations of a considerable and costly nature are carried on through the lake district having Bracebridge as the principal source of supply for both materials and labour.

On August 5, 1913, an extension to the present wharf, 80 feet in length and 20 in width, also a warehouse 32 feet in length and 20 in width, was decided upon at an estimated cost of $9,000.

On February 5, 1914, a contract was entered into with J. O. Ruddick, of Toronto, to do the work.

Work was begun February 18, 1914, and completed May 31, 1914.

Total expenditure for fiscal year 1914-15, is $3,869.94.

BRIGHTON.

Brighton, in the County of Northumberland, is situated on Presqu-ile harbour, Lake Ontario, 22 miles west of Belleville. It is a station on the Grand Trunk railway, and is located in a rich farming district. It has a canning factory. Population, 1,400.

On 25th June, 1914, authority was given to expend the sum of $150 in temporary repairs to the wharf, and work was commenced on July 7 and completed on July 27, and consisted in renewing the decking where absolutely necessary.

Total expenditure for fiscal year 1914-15, was $89.75.

BROCKVILLE.

The work consisted in the removal of a rock shoal which had been drilled and blown by the department during the preceding winter.

This shoal was approximately 60 feet by 75 feet, and was located along the east face of the Government wharf at Tunnel bay, and was a source of danger to boats leaving the Canadian Pacific railway wharf, especially in a heavy east wind.

The whole of the material blown was not removed; one large boulder could not be lifted and remains close to the wharf, but the passage of large steamers is not affected by the present condition of the shoal.

The material was all broken rock, and 285 cubic yards, scow measure, were removed. The place measurement was approximately 180 cubic yards, and expansion factor 58 per cent.

The work was under contract to R. Weddel and Company, of Trenton, Ont., at a price of 85 cents per cubic yard, scow measure, and the work was done on August 25 and 26, 1914.

The improvement should be permanent, as the material is rock.

BRONTE.

Bronte, in the County of Halton, is situated on the northwest shore of Lake Ontario, 27 miles southwest of Toronto, and is a station on the main line of the Grand Trunk railway. It is located in a very rich agricultural district. Population, 350.

On June 12, 1914, authority was given to expend the sum of $1,100 in general repairs to the piers by day labour, and work was commenced June 17 and was completed August 24.

The work consisted in general repairs to the east pier for a length of 150 feet, commencing 374 feet from the end of the pier, where the lighthouse stands.

Total expenditure for fiscal year 1914-15, was $1,095.35.

BRUCE MINES.

Bruce Mines is a town of about 700 in population, situated on the line of the Canadian Pacific railway, about 40 miles easterly from Sault Ste. Marie, and on the north shore of Lake Huron. It has a daily steamboat service with Sault Ste. Marie by two lines of boats, and is a regular port of call for all steamship lines plying

through the north channel of Lake Huron. It is the terminal of the Lake Huron and Northern railway, which is now being reorganized with the object of rebuilding and extending into the fertile north country, and this railway promises to become an important factor in the colonization and development of Algoma district.

Authority was given on July 6, 1914, to expend the sum of $750 by day labour, in making temporary repairs to the wharf.

Work was commenced on August 15, and was completed on August 24, 1914.

This work consisted of replanking the approach and part of the main wharf, replacing decayed timbers in the superstructure, also the levelling of the stone approach. In the performance of this work some 204 tons of rock, 708 pounds of iron and nails, 18,724 feet b.m. of hemlock planking, and 135 feet b.m. of pine timber, were used, with a total expenditure of $674.49.

The outer pile-landing wharf is 91 feet square, and the pile approach is 450 feet long by 20 feet wide.

*Dredging.*

The object of the work is to provide a channel 20 feet below standard low water level which is 580 feet above mean sea level at New York, N. Y., and 150 feet wide from the north channel to the Company's wharf, a distance of about 1,620 feet and a turning basin with a loading slip which will be 890 feet long by 400 feet wide. This so arranged as to enable large freighters up to 500 feet in length to approach and turn around at the wharf.

On August 20, 1914, the departmental dredge *Industry* commenced work, but owing to ice starting to form, work was stopped for the season on November 18. During this period, there was dredged and scowed away a distance of about 1½ miles 122,104 cubic yards, scow measurement, of clay and a small percentage of boulders, and there still remains to be removed an irregular hillock of rock amounting to 7,000 cubic yards, place measurement. After the completion of the season's work, the dredge swept the balance of the area with a heavy steel rail, and in this way levelled the bottom, it is believed, practically to grade.

BURKS FALLS.

Burks Falls, District of Parry Sound, is a village of 700 inhabitants, situated on the Maganatawan river. It is a station on the Grand Trunk railway, Toronto-North Bay division, 56 miles south from North Bay. It is also the terminus of navigation of the Maganatawan river. The Maganatawan River and Lakes Steamboat Company, operate a line of boats plying between Burks Falls and Ahmic harbour a distance of 60 miles.

On June 12, 1914, authority was given to expend the sum of $1,100 on the following work: New deck plank 154 feet by 25, 11,000 feet b.m. on the south portion of the wharf; a pile wharf extension at the north end of wharf, 66 feet in length properly faced and anchored back with tie rods, for which 6,296 feet b.m. lumber and 1,309 pounds of iron were used.

The work was carried on by day labour; was begun August 26, 1914 and completed October 7, 1914.

Expenditure for fiscal year 1914-15 is $1,085.13.

*Dredging.*

The Maganatawan river between Burks Falls, to Ahmic lake, a length of 60 miles, is navigable for small steamboats having a draught of 6·6 feet of water. From above the falls, logs are brought down the river to the saw-mills and as a result driftwood and logs settle to the bed and are an impediment to navigation. Sand-bars have also formed, but these have not been removed.

The object in doing the work was for the improvement of navigation of the river, which has been improved on a length of 12 miles and an average width of 100 feet. The navigation conditions in the immediate vicinity, from the end of the 12 miles to Cecebe and Ahmic lakes on the Maganatawan river are favourable for operating the boats, which can now ply in said river between Burks Falls and Cecebe lake.

The whole work is not completed, the part done consisting of the removal of logs, driftwood and surface boulders only from the bed of the Maganatawan river between Burks falls and Cecebe lake. The whole work originally reported on to be done consisted of the removal of all leaning trees along the banks, logs, driftwood, boulders and sand shoals between Cecebe lake and Burks Falls. The conditions of the work when shut down left all completed save the removal of the sand shoals, which work was estimated to cost the sum of $1,500.

The material removed consisted of logs, boulders and some solid rock at Paget's narrows. All of the material was deposited along the banks of the river, well above high water mark.

The whole work was done by day labour.

The work was begun June 8, and discontinued for the season on November 6, 1914, at an expenditure up to the latter date of $3,249.49.

### BURLINGTON.

Burlington is in Halton county on the northwest shore of Lake Ontario, about ten miles from Hamilton. There is a population of about 1,500 and several factories such as canning, basket, barrel and two planing mills. The Grand Trunk and Canadian Pacific railways both touch the town.

On 6th May, 1914, authority was given to expend the sum of $33,000 for the construction of a revetment wall.

A contract was awarded to Mr. D. G. Stewart for this work on 24th July, 1914, for the sum of $59,982.

Work commenced on 1st July and closed for the season on 18th November.

The work performed during the year was the manufacture of 339 cubic yards of concrete blocks.

The total expenditure for the fiscal year 1914-15 was, $1,897.75.

### BURLINGTON CHANNEL.

Burlington channel, Wentworth county, formerly known as "Burlington Bay Channel," is a channel cut through the beach and connects Lake Ontario with Burlington bay or Hamilton harbour.

Authority was given on 6th May, 1914, to expend $5,800 for the maintenance and operation of the swing bridge.

The bridge was in operation between the 1st April and the 18th December, 1914, inclusive, when it closed for the season.

On 6th May, 1914, authority was given to expend $20,000 for the renewal of part of the superstructure of the south pier and constructing a subway. On the 2nd March, 1914, a contract was awarded to the Canadian Engineering and Contracting Company, amounting to $12,420.14 approximately, at unit rates.

Work was commenced on 20th April and was completed on 20th December, 1914, and consisted of the reconstruction of the superstructure of the south pier with concrete, for a length of 267 feet reaching from the road swing bridge eastward to where the superstructure had formerly been repaired, and the formation of a subway crossing beneath the Grand Trunk railway.

On 3rd November, authority was given to construct a sidewalk 6 feet wide from the said pier along the westerly side of the embankment of the railway for 157 feet, thence westerly for 80 feet to the sidewalk on the beach road at a cost of $246.33.

Further authority was given on 6th November to construct a retaining wall for a length of 150 feet along the foot of the railway embankment and to provide a lighting system for the sidewalk and subway at a cost of $60. All the foregoing work has been completed, and in addition some culled cement blocks have been placed around the pier head of the south pier.

The total expenditure for fiscal year 1914-15 was $14,848.87.

BURNT ISLAND.

Burnt island is one of a group of islands known as "Admiralty Islands," of the Thousand islands at the entrance to the St. Lawrence river, in the County of Leeds, southward off shore from Gananoque.

It is principally used as a picnic ground for the people of Gananoque, and comprises several acres.

On 12th June, 1914, authority was given to expend $3,700 on the construction of a small wharf by day labour and work, which comprised the construction of a wharf 80 feet long by 14 feet wide, with crib-work substructure resting on a stone foundation and having a concrete superstructure reinforced with two steel rails and wire netting, as well as a stone approach 30 feet long by 6 feet wide on top, was commenced on 17th September and completed by 20th November.

Total expenditure for the fiscal year 1914-15 was $3,705.45.

CAESAREA.

Caesarea is in Durham county on the east shore of Lake Scugog, the nearest railway station being on the Burkton-Lindsay branch of the Canadian Pacific railway at Nestleton about four miles distant.

This is essentially a summer resort with several small hotels and boarding houses capable of accommodating about 200 visitors.

On May 5, 1914, authority was given to expend $3,600 for the completion of a wharf, which had been commenced the year before. Work was resumed again on June 1, and completed September 30.

Subsequently, as there was a sufficient amount from the appropriation, it was deemed expedient to build a small house comprising a waiting room and freight room with lavatory.

This latter work commenced on January 13 and was completed by March 31.

The wharf is 75 feet long and 30 feet wide, built of crib-work substructure and concrete superstructure, has a small boat landing on the south side, and a stone approach 20 feet wide on top and 300 feet long. The building, which is standing on cedar posts with waiting room walls sheeted with bristol board, all neatly painted, is 24 feet long by 14 feet wide, exclusive of the projecting verandah roof in front.

The expenditure for the fiscal year 1914-15 was $3,482.91.

CALLANDER.

Callander is a town on the eastern end of Lake Nipissing, in the Township of Himsworth, district of Parry Sound, about eight miles from North Bay, population 600. The Grand Trunk railway, Toronto-North Bay division, and the Canadian Northern, Ottawa-Sudbury division, have stations and freight yards at this place.

Several navigation companies operate on Lake Nipissing, viz., the French River Navigation Company, the Callander Syndicate and a local towing company. Regular calls are made at Callander, French River and North Bay. Callander is a point of transfer for passengers and freight to and from French river. Large quantities of supplies for the lumber camps are also shipped over this wharf.

On June 4, 1913, it was decided to build an extension to the existing wharf consisting of a section 100 feet in length by 20 feet in width, on same line, and at outer end an L of 100 feet in length by 20 feet in width, built of wooden cribs filled with stone and with timber-decking.

On February 12, 1914, a contract was entered into with David Darling of Callander to build the extension to the wharf, for the sum of $6,500.

Work was begun March 16, 1914, and completed May 31, 1914.

Expenditure for fiscal year 1914-15, is, $3,237.79.

*Repairs.*

Authority was given to make repairs to the old portion of the wharf, and to construct, by day labour, a warehouse and shelter on the "T" portion of the wharf.

Work was begun August 6, 1914, and completed October 17, 1914. The materials used in this work consisted of 34,304 feet board measure lumber and 1,743 pounds of iron.

Expenditure for fiscal year 1914-15 is $1,627.83.

COBOURG.

Cobourg in Northumberland county, is on the shore of Lake Ontario and is 69 miles east from Toronto, with which it is connected by the Grand Trunk, Canadian Pacific and Canadian Northern railways. It has several mills, foundries, breweries and a car factory, and an extensive coal trade is carried on with Charlotte, N.Y.

The normal population is about 5,000, but it has also a large American summer population.

On May 5, 1914, authority was given to expend $14,000 for the completion of the extension of the west breakwater by day labour.

Some work had been done last year, was resumed on July 13 and completed on October 28, 1914.

The work comprised the building and placing of a crib 110 feet long by 30 feet wide, with stone ballast and concrete superstructure, at the end of the former structure, this greatly protecting the inner harbour.

On May 6, 1914, authority was given to expend a sum of $13,000 for the reconstruction of the centre pier, and by a subsequent letter of June 6, a further amount of $18,000 for the same work was authorized.

Contract was awarded on April 6 to the R. Macdonald Company, for $27,334.95, approximately by unit measurement, for the carrying out of this work.

Work was commenced on April 27 and closed down for the season on November, 19, 1914.

The whole contract comprises the renewal of the superstructure and rebuilding with concrete for a length of 351 feet by 30 feet in width and 300 feet in length by 18 feet in width from shore outwards, also the entire removal by dredging or otherwise of both substructure and superstructure of another 189-foot length of the old pier, and the dredging away of some remaining substructure for 150 feet in length varying from 30 to 31 feet wide.

At the closing down of the work for the season, all the old superstructure had been removed, and part of the concrete superstructure had been built; that is to say, 296 feet of the 30-foot width and 50 feet of the 18-foot width adjoining; the concrete blocks for superstructure were placed fully for 30 feet at the outer end and an additional 15-foot section towards the inner end, also the manufacture of 60 concrete blocks ready to place in the spring.

*Repairs.*

On May 5, 1914, authority was given to have repairs made to the east pier by day labour at a cost of $5,000.

This work was commenced on May 25 and completed on October 15.

It consisted of building a revetment wall on the east side of the east pier near shore for a length of 218 feet and width of 12 feet, with crib substructure and concrete superstructure, and filling the whole with stone and gravel including a 4-foot space between this revetment wall and the pier proper for a depth of 7 feet.

On November 14, authority was given to expend $275 in renewing the face timbers on the harbour side of the east pier including some cross-ties for a length of 68 feet, a width of 16 feet and depth of 7 feet, and placing five new snubbing posts, all of which has been done.

The total expenditure for the fiscal year 1914-15, was $49,047.42.

*Dredging.*

On July 22, 1914, authority was given to have the R. Weddell Company remove from the inner harbour an estimated quantity of 9,000 cubic yards, scow measurement, class "B" material, at a rate of 20 cents per cubic yard. This improvement was to permit vessels laying up close to the northern esplanade.

The work commenced on July 23 and was completed August 6.

There was an area taken out to a depth of 16 feet in the inner harbour along the north side in front of the esplanade, 600 feet in length, and varying in width from 140 to 100 feet. This necessitated the removal of 9,007 cubic yards, scow measurement, of mud and silt, or 6,753 cubic yards by place measurement.

There is no reason why this work should not give satisfactory results for many years.

The expenditure for the fiscal year 1914-15 was $1,852.80.

COLDWATER RIVER.

The Coldwater river, from its mouth to the Government wharf at the Village of Coldwater, was dredged in 1912 by the Department of Public Works to a depth of 10 feet below Georgian bay zero of gauge 580·0. In August, 1912, instructions were given to make a survey and estimate of cost of the remainder or unfinished portion of the Coldwater river from the Government wharf to Sturgeon Bay bridge, a length of 3,172 feet. No dredging has been done in this section of the river to date.

At a later period September 2, 1914, a request was made to the department for the removal, from the bed of the Coldwater river, of all sunken logs, debris and boulders, which has been done.

The object of doing this work was for the purpose of making that portion of the Coldwater river, from the government wharf to Sturgeon Bay road, navigable for small steamboats and gasoline launches.

The whole project in so far as cleaning up the bed of the river from the government wharf to Sturgeon Bay bridge is completed. There still remains the dredging of the shoal in the river to do, also the sheet pile protection.

The material removed consisted of logs, driftwood, debris and surface boulders, and the work was performed by day labour.

The work was begun October 1 and completed November 5, 1914, at an expenditure up to that date of $450.37.

COLLINGWOOD.

Collingwood, in the County of Simcoe, is situated on the extreme southerly portion of the Georgian Bay, known as Nottawasaga bay. It is 94 miles from Toronto by the Grand Trunk railway, and has numerous important manufactures, one of which is the Collingwood Shipbuilding Company, doing an annual business of over a million dollars.

There is also a large shipping trade in lumber, coal, grain and general merchandise including fish which are caught in large numbers off this port.

Collingwood is the starting point of the upper lake steamship traffic and in consequence has a very busy harbour. Population is 6,000.

On May 22, 1914, authority was given to have the departmental dredge *Industry* remove an estimated quantity of 20,000 cubic yards from the westerly side, at the outer end of the entrance channel.

Work was commenced on July 27 and completed by August 6, 1914, and consisted of widening the outer end of the entrance channel (in continuation of work performed during the previous year) on the west side. Two cuts were made here, one of which was 150 feet long and the other 750 feet long, each being 37 feet wide and to a depth of 20 feet below low water level. The same depth was reached in the open lake. In making these cuts, 16,742 cubic yards, scow measurement, of hard-pan or cemented gravel, or approximately 10,882 cubic yards, place measurement, were removed, allowing 35 per cent expansion for this class of material.

In addition to the above, the dredge worked during the same period, that is on July 30, at the Charlton Lumber Company's wharf, clearing mud and saw-mill refuse from the rock to enable barges to load deeper while at the wharf. This comprised the removal of 1,111 cubic yards of overcasting from a cutting 250 feet long by 40 feet wide to a depth of 13½ feet, the face of cut being about 3 feet.

The material of the Georgian bay does not seem to drift particularly and therefore the benefit of the channel work will remain indefinitely. The work at the Charlton wharf keeps filling in continually.

CRAIGIE LEA.

Craigie Lea, Township of Medora, District of Muskoka, is situated on Lake Joseph and is on the steamboat line of call by boats operated by the Muskoka Lakes Navigation Co., with headquarters at Gravenhurst.

The surroundings of the shores of the lake is largely built up with summer hotels and cottages.

Authority was given to construct a wooden crib wharf 50 feet in length by 14 in width, with a stone approach 62 feet in length and 12 in width on top, also a small shelter 3 feet in width and 12 in length.

The work was begun by day labour, October 4, 1914, and continued up to March 31, 1915, when operations were closed for the season leaving the gravel topping to be placed on the approach.

The materials used in the construction of the work consisted of 2,500 shingles, 17,981 b.m. timber, and 2,710 pounds of iron.

Total expenditure for fiscal year 1914-15 is $2,026.60.

CUMBERLAND.

Cumberland, a village in Russell county, with a population of 800, is located on the Ottawa river 18 miles below Ottawa and on the Canadian Northern Railway, Montreal line.

Four broken fenders were renewed in hardwood 12 by 12-inch square.

Expenditure to March 31, 1915, is $84.08.

DAWSON POINT.

Dawson Point, in Nipissing district, is a landing on Lake Timiskaming and serves an agricultural district.

The wharf was slightly damaged by floating logs, in the spring, necessitating minor repairs to approach roadway, which were carried out, May 13 and 14. The lower side of riprap wall was replaced and material was hauled and placed on roadway.

DOE LAKE.

Doe lake, township of McMurrich, District of Parry Sound, is situated 2½ miles southeast of the village of Sprucedale, the latter having a population of 250, is a station on the Ottawa-Parry Sound division of the Grand Trunk railway.

Doe lake belongs to a chain of lakes which drain into the south branch of the Maganatawan river. This chain of lakes forms a navigation route of ten miles in length connecting the village of Sprucedale with a summer resort named Katrine. In the year 1913, the Grand Trunk Railway Co. built a spur line from the main line at Sprucedale to Doe lake, a distance of 2½ miles, for the purpose of accommodating the summer tourist traffic.

On June 12, 1914, authority was given to construct a wharf consisting of a wooden crib 50 feet in length of 14 feet in width with a stone approach to same 260 feet in length and 12 in width, said wharf to be located at the foot of the concession road allowance between lots 5 and 6 in Township of McMurrich.

At a later period, July 24, 1914, and prior to starting work, a second wharf, to be located on Doe lake at the terminus of the spur line from Sprucedale and nearer to that village, was asked for; provided the vote of $1,900 would be available to construct not only the one wharf at Doe lake, but part of the vote utilized to provide accommodation at the second point referred to.

The dimensions of the wharf, as built at the foot of the concession road, are as follows:—A pile wharf 48 feet in length and 14 in width with an approach to same 260 feet in length and 12 in width.

The dimension of the second wharf, located on Doe lake at terminus of Grand Trunk railway spur line, are:—A pile wharf 32 feet in length, 12 in width with an "L" 14 feet by 18 and a stone approach to same 30 feet in length and 12 in width, located at the foot of a side road.

The work on the two wharfs was begun by day labour August 5, 1914, and continued up to January 15, 1915, when operations were closed for the season leaving some stone to be placed in the approaches to the junction of same with the wharf, and gravel topping.

The materials used in the construction of these wharfs consisted of 45 piles, 10,092 feet b.m. timber and 1,295 pounds of iron.

Total expenditure for fiscal year 1914-15, $1,785.37.

DYER'S BAY.

Dyer's Bay is in Bruce county, at the northeast corner of the Bruce peninsula on the Georgian bay. It is about 40 miles northerly by road from Wiarton, the nearest station on the Grand Trunk railway. There is quite a large shipment of lumber and cord-wood, the latter being principally used at the chemical works at Thornbury. There is one store, a saw-mill and several small dwellings.

On 29th July, 1914, authority was given to expend $250 on repairs to the wharf, and work commenced on 19th and was completed on 31st March, 1915, and consisted of repairs to the decking and coping, especially to the bridged portion, the abutment on shore and the first submerged crib.

The total expenditure for the fiscal year 1914-15 was $189.95.

ELK LAKE.

Elk Lake, a town in Nipissing district, is located on the Montreal river 53 miles above Latchford and on the route to Gowganda.

During the summer, an agreement was entered into with Mr. R. Woods, of Elk Lake, to rebuild the easterly approach of wharf, 105 feet 6 inches long by 12 feet wide, for the sum of $300. The floor system was placed on framed bents of cedar at about 12 feet centres. The work was completed satisfactorily in August.

Expenditures to March 31, $300.

FITZROY HARBOUR.

Fitzroy Harbour, a village in Carleton county, is located on the south shore of the Ottawa river just below Chats falls.

A contract was awarded Messrs. Thos. & John Moran, for the construction of a wharf at Fitzroy Harbour, March 2, 1914, for the sum of $7,166.90, at unit prices.

Work commenced April 2, and was proceeded with until October 15, when it was completed.

The structure of cribwork and earth backfill, consists of a landing-head 96 by 48 feet, built to elevation 198, drawing 9 feet at face; low level landing 16 by 48 feet at elevation 193; freight shed, 16 by 48 feet built on posts; two stairways aggregating 130 lineal feet and a spiral roadway (cut and fill) 314 feet long at 8 per cent grade.

Expenditure to March 31, $7,563.43.

*Dredging.*

The complete proposed dredging, only part of which was done during past season, consists of an aggregate length of channel ¾ mile long by 60 feet wide along the tangents, and 90 feet wide in the curves, together with a turning basin in front of new wharf, all to a sub-grade of 10 feet below L.W.L. To complete this improvement, it is estimated 20,000 yards, scow measure, have yet to be removed, the object being to facilitate landing of boats at the public wharf.

The departmental dredge *No. 108* worked at Fitzroy Harbour, August 26-November 14, starting at the outside entrance of proposed channel and working in towards the wharf. Cuts aggregating 70 feet in width by 380 feet were dredged to 10 feet grade. This portion of the channel was found to be in good condition when examined after dredging.

Eight thousand six hundred and seven yards, scow measure, boulders, gravel and clay removed, and from surveys before and after, the corresponding quantity, place measure, is 5,348 cubic yards. To obtain a fair expansion factor, 1,917 yards casting over, handled twice, should be deducted from total scow measure; when expansion factor is found to be 24·7 per cent.

To complete the work will require all of 1915 season or about six months.

FORT WILLIAM.

Fort William, a city of 22,000 inhabitants is situated at the west end of Lake Superior, at the mouth of Kaministiquia river, in the District of Thunder Bay.

It is the principal lake port on the north shore of Lake Superior, and terminal of two transcontinental railways.

Through this port, the terminus of lake navigation, the bulk of the grain in the Canadian west passes on its way to the markets of the east.

Dredging was resumed in this harbour for the season 1914-15, on May 6, when dredge *No. 5* commenced work.

| | | | | |
|---|---|---|---|---|
| Dredge | *No. 5* | commenced | work | May 6. |
| " | *Frank* | " | " | " 7. |
| " | *No. 8* | " | " | " 8. |
| " | *Dominion* | " | " | " 8. |
| " | *No. 1* | " | " | " 8. |
| " | *No. 6* | " | " | " 9. |
| " | *No. 15* | " | " | " 28. |
| Clamshell | *Joubert* | commenced | work | June 8. |
| " | *Imperial* | " | " | " 8. |
| " | *Empire* | " | " | " 15. |
| " | *No. 7* | " | " | " 11. |

These dredges have been continuously at work during the season, and have operated in various portions of the harbour.

Dredge *No. 6* was withdrawn for two short periods of three days each to do a small amount of work at Port Arthur waterworks intake.

### *Kaministiquia River.*

The 13·4 acres of solid land comprising the first portion of the West fort turning basin was removed, and up to the present time about 21 foot depth of water for navigation purposes has been given over this area, and about one month's work in the spring will place this excavation down to grade level.

Above the Grand Trunk Pacific bridge, the heavy excavation or 7·13 acres of solid land being the widening of the river in this section, has been to a great extent removed and a month's work in the spring will complete this section.

Shoal areas in front of Canada foundry, Horne elevator, and Dwyer elevator were removed.

Deepening of the Kaministiquia river was carried on over the area extending from Consolidated elevator, easterly to opposite the International Harvester location, and vastly improved conditions for navigation resulted therefrom. A section of land in connection with the widening west of elevator "D" was removed, but owing to the fact of the city water mains crossing the river at this point, it was impossible to complete this section, and no further improvements can be made in this locality until such time as the city constructs a tunnel to take care of this water pipe crossing.

### *Mission River.*

A small amount of work was done in removing a shoal area in front of lot 2, concession "A." Deepening of the Mission river for its full width was carried on over the area extending from Kaministiquia river to starch works.

The balance of the widening opposite the Fort William coal docks was accomplished.

Work was actively carried on in completing Grand Trunk Pacific slip *No. 3*, which was accomplished by July 10.

In regard to Grand Trunk Pacific slip No. 2, work was actively resumed on July 3, very great improvement has resulted from the work done this year. Some two month's work next season will complete this section.

Excavation for crib-seats in connection with Mission wharfs contract was carried on so as to enable the contractors to proceed with the sinking of cribs for revetment wall, and this work was completed by October 1.

*McKellar River.*

Work was actively resumed on the heavy work of the McKellar river on May 9, and work continued until December 11, when this waterway was completed, and final estimate given March 16. The total excavation amounted to 751,944 cubic yards.

Work was commenced on McKellar widening on October 19, and this work was completed and final estimate given on February 25. The total amount excavataed under this contract was 144,239 cubic yards.

The amount of material removed by the various dredges is as follows:—

| | |
|---|---|
| Dredge *Dominion* | 1,055,310 |
| " *Frank* | 689,476 |
| " *No. 15* | 226,182 |
| " *No. 8* | 398,941 |
| " *No. 6* | 273,073 |
| " *No. 5* | 603,484 |
| " *No. 1* | 95,790 |
| Clamshell *Joubert* | 13,778 |
| " *Imperial* | 38,221 |
| " *Empire* | 34,394 |
| " *No. 7* | 110,544 |
| Backfilling | 122,521 |
| Total | 3,661,714 |

A total of 3,661,714 cubic yards were removed between May 8 and December 11, made up as follows:—

*Kaministiquia River.*

| | |
|---|---|
| West Fort turning basin | 582,092 |
| Above Grand Trunk Pacific bridge | 472,182 |
| Canada foundry dock | 4,656 |
| Horne elevator | 3,793 |
| Consolidated elevator to power house | 222,269 |
| Power house to pipe line | 169,124 |
| Pipe line to Harvester dock | 185,850 |
| Dwyer elevator | 6,437 |

*Mission River.*

| | |
|---|---|
| Mission opposite starch works | 95,508 |
| " river in front of lot 2 | 6,319 |
| Grand Trunk Pacific slip No. 3 | 184,044 |
| Mission opposite coal dock | 84,459 |
| Grand Trunk Pacific slip No. 2 | 590,544 |
| Backfilling | 122,521 |

*McKellar River.*

| | |
|---|---|
| McKellar river contract 8787 | 728,618 |
| " " widening 10298 | 203,298 |

Summary—

| | |
|---|---|
| Total of Kaministiquia river | 1,646,403 |
| " Mission river | 1,083,395 |
| " McKellar river (8787) | 728,618 |
| " " " (10298) | 203,298 |
| Grand Total | 3,661,714 |

In regard to the type of excavation, the material encountered in the dredging was to a great extent clay formation.

The West fort turning basin work was to a great extent sand excavation.

In the McKellar work, the glacial drift formation was encountered, which was found very hard to excavate. This material consisted of clay, sand, boulders and cemented gravel, almost in the nature of concrete. One excessively large boulder amounting to 311 cubic yards was removed.

The work accomplished in the harbour of Fort William this year has been of very great benefit to the marine interests on account of vastly improved conditions.

The continuation of dredging operations for two seasons more will place the harbour of Fort William in splendid condition, and the maintenance of same afterwards, provided no extra work is let, will be a small factor.

*Summary of Cost.*

| | | |
|---|---|---|
| To paid | Contractors | $669,004 55 |
| " | Inspection | 6,396 00 |
| " | Justice of the Peace (affidavits) | 249 00 |
| | Total | $675,649 55 |

FREDERICKHOUSE RIVER.

Representations were made to the department in July and August, 1914, that great difficulty was being experienced by mining and lumbering interests on Night Hawk lake, in Algoma East, on account of the extremely low stage of the water, and a request made that a temporary dam be constructed on Frederickhouse river, to hold the water at an elevation 2·5 to 3 feet higher than that which obtained at that time.

Mr. C. L. Williams, a mill owner at Connaught, offered to construct a suitable dam for the sum of $400. Mr. Williams' offer was accepted, and by August 25, a dam 751 feet long, capable of raising the water level 2·5 to 3 feet was constructed. It was built of round timber and plank sheeting covered by a heavy clay apron.

Expenditure to March 31, $400.

GOAT ISLAND.

*Dredging.*

Goat Island is the terminal port of the Algoma Eastern railway, situated opposite the town of Little Current, on the narrow strait connecting Georgian Bay and the north channel of Lake Huron, known as the Little Current channel. This railway was completed in 1913, and extends inland to Sudbury a distance of 80 miles, passing through timbered and mineral land which promises to be developed thereby. The traffic offering at present consists principally of coal, of which immense quantities are required in connection with the reduction of nickel at Copper Cliff, and for other industries at Sudbury, Espanola, Victoria Mines, etc. Also it seems to be of superior strategic location for the economic importation of coal to supply the C. P. railway and the C. N. railway in the Sudbury district. The terminal consists of tracks and switching yard layout with a capacity of about 400 cars, engine-house, coal chute, repair shop, waterworks, etc., a coal wharf and storage ground for 75,000 tons of coal over which there is a large coal hoist with a capacity of about 200 tons per hour and a commercial wharf for the handling of package freight. These wharfs are respectively 430 and 400 feet long, constructed parallel with the channel and in line with each other, but the former has already proved inadequate for the traffic offering, and the company proposes to extend it westerly to the commercial dock a distance of

685 feet, and easterly a distance of 650 feet, providing the Government favourably considers the extension of the area of dredging to give access thereto. The increased yearly traffic offered, which these extensions are to provide, include 150,000 tons of coal, 50,000 tons of limestone rock for smelting purposes, 15,000 tons of paper for export, manufactured by the Spanish River Pulp Company at Espanola, etc.

Little Current is the most important town and port on Manitoulin Island, and has a population of about 1,000. All boats plying through the north channel of Lake Huron have to pass through the Little Current passage, and consequently it is much used.

The object of the work is to provide an approach to the wharfs of the Algoma Eastern Railway Company, for deep draught vessels, and to widen the existing channel. When the whole of the improvements proposed to this channel are completed, it is expected that nearly all boats, including the large freighters plying between Lake Superior and Georgian Bay ports, will adopt this route, which is practically the same length, but much more protected than the open Lake Huron route. The proposed work is of a semi-private nature, as its immediate urgency is to provide approaches to the wharfs of the Algoma Eastern Railway Company, but it is at the time exclusive of the interests of the railway, an important improvement for the general navigation of the channel.

On September 2, 1913, a contract, No. 9589, was entered into with the Soo Dredging and Construction Company, Limited, of Sault Ste. Marie, Ont., for the dredging of 23,500 cubic yards, place measurement, of rock, to a depth of 22 feet below standard low water level, at a unit price of $2.90 per cubic yard, to be completed by December 15, 1913.

Work was commenced immediately and was closed for the season on December 15, 1913. The area under contract to be dredged consisted of a section lying in front of the Algoma Eastern Railway Company's coal wharf, 400 feet long, with an average width of 150 feet. During the season, 19,867 cubic yards were removed; of this amount 17,884 cubic yards were scowed away a distance of about 2 miles, 1,983 cubic yards were cast over the wharf into the filling behind.

Instructions were issued on June 23, 1914, that an Order in Council had been passed, granting an extension of the contract (No. 9589) to December 15, 1914, and advising that $50,000 had been voted by the last session of Parliament for dredging at this place. Accordingly, additional work was laid out consisting of an area 100 feet wide on the west side, and an area 390 feet wide on the east side of and adjoining the previous year's work.

On September 27, 1914, advice was received that an Order in Council had been passed on September 11, granting authority for the removal of an additional 17,240 cubic yards, place measurement, over and above quantities previously authorized, and it was provided as a condition to the acceptance of the work that the contractors finance the cost of the removal of this 17,240 cubic yards, and await payment therefor until Parliament shall have provided the necessary funds. The area laid out to be dredged in connection with this last authorization consisted of a section 430 feet long lying in front of the commercial wharf.

Work was commenced on June 19, and was suspended on December 15, 1914. During the season, 29,782 cubic yards of limestone rock were removed, of which 27,935 cubic yards were scowed away a distance of about 2 miles, and 1,847 cubic yards were over cast into the filling behind the commercial wharf.

### GODERICH.

Goderich, in the County of Huron, on Lake Huron, at the mouth of the Maitland river, is the county town. It is 68 miles northerly from Sarnia and 60 miles from London. The Grand Trunk and Canadian Pacific railways both have branch terminals here.

There are several important manufacturing concerns and a very large business is done in the transportation of grain and flour. A valuable deposit of salt is found in the vicinity. Shipping both by water and rail is large, which includes live stock and other farm products. The population is approximately 5,000, with a large augmentation during the summer months by tourists and cottagers.

On September 28, 1914, authority was given to expend the sum of $5,000 in placing rip-rap against the north face of the westerly end of the river breakwater by day labour.

The work started on November 2 and is still in progress. Subsequently, on January 12, 1915, a further grant of $5,000 was authorized and again on March 6, 1915, a further grant of $3,000 was authorized to be expended for placing this rip-rap.

On June 12 and October 21, 1914, authority was given to expend $100,000 for the construction of an extension to the southwest breakwater; and on October 30, a contract was awarded to Mr. Wm. Bermingham for the sum of approximately $273,863.60 unit rates, to build the same. All that has been done so far in this respect is to procure the material to enable him to commence active operations in the spring.

On May 6, 1914, the expenditure of $68,000 for the completion of an extension to the northwestern lake breakwater was authorized. A contract was awarded to Mr. Wm. Bermingham on May 17, 1912, for the sum of $265,000. As a large portion had been completed previously, work was resumed in May and was completed by August 31, 1914.

On June 1 and July 13, 1914, the expenditure of $2,000 was authorized to construct a tunnel through the river breakwater from the harbour to the Maitland river by day labour, to enable canoes, skiffs, etc., to pass from one side to the other without the necessity of going around by the lake in rough weather.

The construction commenced on June 6 and was completed on November 9. It consisted of cutting an opening through the breakwater and timbering up the sides and top.

On May 5, 1914, $2,000 was authorized to be expended in general repairs to the several structures about the harbour. Work commenced on September 4 and is now completed.

The expenditures for the fiscal year 1914-15, are:—

| | |
|---|---|
| For rip-rap to river breakwater | $12,983 10 |
| For extension of S. W. breakwater | 5,166 77 |
| For extension of N. W. breakwater | 65,144 92 |
| Constructing tunnel | 1,994 93 |
| For general repairs | 2,000 10 |

*Dredging.*

On May 27, 1914, authority was given to expend $23,792 for dredging. A contract, dated June 1, 1914, at a rate of 16 cents per cubic yard, scow measurement, for class "B" material, was awarded to Messrs. Jennings & Ross.

Work which was for the improvement of the entrance to the harbour, was commenced on June 8.

The estimated quantity of material to be removed was 148,700 cubic yards, scow measurement, of class "B," a mixture of hard sand overlying hard blue boulder clay.

There was an irregular area taken from the entrance channel between the outer end of piers and the outside breakwaters to a depth of 22 feet below zero of gauge and averaging 1,100 feet long, with a width of 340 feet in centre tapering towards both ends. The quantity removed was 93,679 cubic yards, scow measurement, or 65,576 place measurement, allowing 43 per cent for expansion. This amount is a

little less than two-thirds of the estimated quantity. Although the contract was not to expire until December 15, the work closed for the season on October 19, on account of rough weather.

As this channel is now pretty well sheltered and is to be still further protected by extension of the outside lake breakwaters, the improvement should last for a number of years.

The expenditure for the fiscal year 1914-15 was $15,846.64.

### GORE'S LANDING.

Gore's Landing, in Northumberland county, on the south shore of Rice lake, 12 miles north of Cobourg, is a small village with about 100 inhabitants, and in the centre of a fertile farming district.

Permission was given on July 17, 1914, to expend $150 on repairing the decking, stringers and waling of the wharf and improving the approach by placing a tubular culvert on the east side of the main road.

Work was commenced on 16th and was completed on September 26, 1914.

Total expenditure for the fiscal year 1914-15 was $150.91.

### GRAND BEND.

Grand Bend is a village situated on the easterly shore of Lake Huron, at the mouth of the Sauble river, about 13 miles from Parkhill, the latter place being the nearest railway station. It is also 15 miles from Exeter, and about 30 miles south of Goderich. It is a favourite summer resort and a considerable amount of fishing is done.

Authority was received to proceed with work of repair and improvement which was commenced on May 11, and was completed on September 30, 1914, and consisted of the following:—

(1) The north pier for a length of 270 feet at the inner end was entirely rebuilt above water level. New stringers were used throughout and 22 new cross ties were placed; the face timbers, decking and balance of cross-ties consisted of old timber from the pier which had been washed out by heavy storms in November, 1913, and had been salvaged.

(2) The outer end of this pier, for a length of 245 feet was rebuilt with new decking, new stringers and salvaged cross ties.

(3) 150 cords of rubble stone were placed in the pier for filling.

In the execution of the above work, the following amounts of new materials were used:—

51,200 feet, b.m., timber, 2,000 lbs. of iron, 150 cords of rubble stone.

In addition, 25,000 feet, b.m., of material salvaged after the pier was damaged by storm, were used.

The expenditure for the fiscal year 1914-15 is $4,495.48.

### HAILEYBURY.

Haileybury, a town in Nipissing district with a population of 3,800, is located on the west shore of Lake Timiskaming and on the main line of the T. and N. O. railway.

Improvements to Haileybury harbour were made by day labour June 25 to September 25.

The railing of wharf approach was straightened and painted, also the wheel-guard on approach and landing-head was painted. The concrete facing of stone wall on north side of approach, begun in 1913, was completed on a length of 239 feet.

The cribwork portion and end walls of new market wharf were built and 600 cubic yards of backfill were placed, the balance having to be left over till next season. The structure consists of stone ballasted cribs 16 feet wide by 249 feet long, drawing 8.5 feet, and built to a height of 7 feet above fall R.W.S. (elevation 584.5), with stone end walls faced with concrete and earth backfill.

In March, the ice was cut around the pilework wharf and some minor improvements and repairs were made to braces.

Expenditure to March 31, $7,990.66.

*Dredging.*

The departmental dredge *No. 118* worked in Haileybury harbour (Aug. 27-Sept. 24) deepening basin back of landing-head to provide winter berths for boats when the Lake Timiskaming storage basin is at a low level. The entrance channel, about 100 feet wide from outside face of wharf, and basin inside, 200 feet by from 200 to 300 feet, was dredged to grade elevation 566, or a depth of 10 feet below datum elevation 576 (winter level).

Six thousand one hundred and five yards (scow measure) clay were removed. The corresponding place measure quantity from surveys before and after dredging is 5,075 yards and the expansion factor is, therefore, 20·3 per cent.

*Shipyard.*

The Haileybury shipyard, located two miles north of Haileybury harbour, on Lake Timiskaming, has been in operation during the past season.

The tools and small plant, for day labour works on Lake Timiskaming and other points throughout the district, were kept in repair and stored at the yard. Minor repairs were made to service dock. The construction fleet, used on Lake Timiskaming was launched, all necessary repairs were made and pulled out on ways again at close of season; scows and pile-driver improved for coming season. A floating boat house 16 by 40 feet was built for launch *Blue Bell*. This launch was maintained and run in connection with carrying on of works on Lake Timiskaming. Additions were made to stock of timber for plant repairs, etc.

Extensive repairs to the dredging fleet on these waters were carried out at the shipyard.

Expenditure to March 31, $3,011.76.

*Dredging.*

The departmental dredge *No. 118* worked at the shipyard (August 1 and September 26-October 31) deepening basin in front of shipways and service dock to make winter berth for floating plant, when Lake Timiskaming storage basin is at low level. The inner basin of irregular shape is 200 feet wide by 240 long and is dredged to grade depth of 10 feet below datum or winter level (elevation 576).

Eight thousand two hundred and fifty-nine yards (scow measure) of clay were removed. From surveys before and after dredging, the corresponding place measure is 6,858 yards, therefore the expansion factor is 20·1 per cent.

HAMILTON.

Hamilton, in Wentworth county, on Burlington bay, Lake Ontario, has the best natural harbour and the largest consigned shipping on the Great lakes, on the Canadian side.

There are upwards of 440 manufacturing concerns, many of which are very large. Population, 80,000. The Grand Trunk, Canadian Pacific, and Toronto, Hamil-

ton and Buffalo railways; also a number of radial lines touch this place. Large expenditures have been incurred on this harbour by the Government since 1891.

Authority was given on May 6, 1914, to expend the sum of $100,000, which was supplemented on June 12 following, authorizing $75,000 more for harbour improvements.

A contract had been let on March 10, 1913, to Messrs. J. W. Hennessy, W. H. Poupore, W. H. Dyer, and John Taylor, for a sum approximating $178,000, at unit rates, which was for the construction of a retaining wall 1,566 feet long, having a deck 10 feet wide, as well as dredging in the harbour to a depth of 16 and 17 feet.

The work has been carried on since April 1, and is still in progress.

The work completed to the end of the fiscal year is: 145 of the bents, or 724 piles, varying from 30 to 50 feet in length, have been driven, of which bents 127 have been capped, 98 have been cross-braced; 901 cubic yards of concrete blocks have been made, of which 658 cubic yards have been placed in position on the bents, stringers 12 by 12 inches, equalling 14,976 feet b.m. have been bolted to the face of the bents; 866 feet run or 1,331,400 pounds of steel sheet piling has been driven along the face; 10,780 feet b.m. of oak waling has been bolted to the steel sheet piles and 27 guide piles have been driven; 260 lineal feet of the wooden face piling has been driven and 12 lengths of 10- by 12-inch stringers, amounting to 2,400 feet b.m. were bolted thereto; 776 lineal feet of horizontal brace timbers, equalling 9,312 feet b.m. have been bolted to the rear of the bents, and 811 lineal feet of the concrete decking have been finished. In addition to the foregoing, approximately 281,000 cubic yards have been dredged and deposited behind the wall.

This wall having slightly sprung outwards has since been strengthened with anchors and rods.

The total expenditure for the fiscal year 1914-15, was $167,372.53.

*Dredging.*

On June 6, 1914, instructions were given to dredge at the Oliver plough works, and subsequently, on October 31, three days' work was authorized at Brown's wharf.

Work commenced at the Oliver plough works on June 10, and continued until November 19, 1914, when the plant closed down for the season.

During the time the dredge was working, there were, 211,383 cubic yards, scow measurement, of class B material, removed from the area in front of and leading to the Oliver plough works.

During the past few years, a large portion of this channel had been dredged, but had partially filled again, therefore where the filling had occurred it was gone over again and widened to 350 feet for a total length of 3,081 feet, and was taken to a full depth of 20 feet below low water.

The work for the past fiscal year was widening the whole channel 50 feet, also making two cuts 3,080 feet long by 40 feet wide, each inside the fifty-foot extra width, and clearing the whole of the remainder off in part where necessary to ensure the full depth of 20 feet.

HAWKESTONE.

Hawkestone is in Simcoe county, on the west shore of Lake Simcoe, 15 miles north-east of Barrie, on the North Bay branch of the Grand Trunk railway, and has a population of about 200.

Authority was given on May 5, 1914, to expend $3,500 for repairs to the wharf by day labour, and the work was commenced on June 1 and was completed by October 24, 1914, comprised the reconstruction of the superstructure in concrete for 129 feet

long by 18 feet wide, and an L at the outer end 69 feet long by 18 feet wide; the latter has a small boat landing on the northern side 4 by 7 feet. This wharf is connected with the shore by a stone approach 100 feet by 18 feet wide on top.

Total expenditure for the fiscal year 1914-15, was $3,523.95.

### HELEN'S BAY.

Helen's Bay is a part of the north channel of Lake Huron, situated in front of the township of Burpee, on the Manitoulin island, about 12 miles westerly from Gore bay. The locality is fairly well settled with a population of about 100, and the trade is entirely in livestock and farm produce.

Authority was given on May 29, 1914, to expend the sum of $200 by day labour in making the necessary repairs to the public landing wharf.

Work was commenced on July 13, and it was completed on September 23, 1914. The work consisted of filling up and levelling the stone approach and painting the warehouse, and in the performance of it some 100 cubic yards of stone and gravel was hauled and placed on the approach, with a total expenditure amounting to $197.65.

### HOLLAND RIVER.

The Holland river forms the boundary between the township of West Gwillimbury, in Simcoe county, and East Gwillimbury and King, in York county, but the village of the same name is about 2½ miles east from the river in East Gwillimbury, York county, and 6 miles south from Cook's bay, which is a southern arm of Lake Simcoe. There is a population of about 450. The Grand Trunk railway passes through.

On June 12, 1914, authority to expend $1,000 for repairs to the wharf was given.

Work commenced on October 8 and closed for the season on November 25, 1914.

The work consisted of driving a line of piling for a length of 75 feet, to protect the wharf.

The total expenditure for the fiscal year 1914-15, was $1,264.47.

### HONEY HARBOUR.

#### *Big Dog Channel.*

Big Dog channel is one of the numerous passages that are to be found in Honey harbour, bounded on the south by South Honey harbour, Roberts island and Georgian bay, on the north by Beausoleil island. The whole territory within the boundaries of the island is a summer resort of considerable importance, and in addition a large number of summer cottages and hotels are in use during the summer season. To accommodate this large traffic, the Northern Navigation Co., now merged into the Canada Steamship Co., operate a first-class passenger boat the *Waubic*, which plies between Penetanguishene and Parry Sound and by so doing follows the steamboat channel among the islands calling at all of the most important points on the way up and down.

Big Dog channel by reason of shallow water was not navigable for gasoline launches or supply boats, so that residents on the west side of Little Beausoleil and Roberts island traverse the full length of the bay to the south end of Roberts island in order to make communication with the main steamboat channel.

The object of doing the work was for the purpose of securing a sufficient depth of water to enable supply boats and gasoline launches to make shorter connection with the main steamboat channel.

The length of the improved channel is 111 feet, average width 35 feet, giving a depth of 5 feet of water below the zero of gauge of Georgian bay elevation 580.0.

The channel is located between Roberts island and Little Beausoleil island, about one mile west of the main steamboat channel.

The whole project was completed in the fiscal year 1914-15.

The material removed consisted of solid rock and some boulders, and the quantity removed, place measurement, was 427·22 cubic yards.

The expansion factor 80 per cent, making scow measure 769·0 yards.

The contract rate of payment was $8 per cubic yard, making the payment due the contractor $3,417.76.

The work was begun May 27, and completed October 22, 1914.

### HUNTSVILLE.

Huntsville, Township of Chaffey, District of Parry Sound, is situated on the northern division of the Grand Trunk railway, population 2,000. The Huntsville and Lake of Bays Navigation Company, who operate a line of boats between Huntsville and Baysville, have their headquarters at Huntsville.

These boats are patronized by a large tourist traffic, which is increasing annually. The principal industries consist of one large tannery and two saw-mills.

Authority was given to make repairs to the wharf, consisting of new pipe railing, concrete curbing and re-inforcing iron. The materials used consisted of 72 feet sewer tile, 520 feet of pipe and 874 feet lumber.

Work was begun May 23, 1914 and completed June 23, 1914.

Expenditure for fiscal year 1914-15, is $235.65.

### JUNIPER ISLAND.

Juniper island is in Peterborough county and Stoney lake. It is the centre for the distribution of supplies for tourists and cottagers using the easterly part of Stoney lake as a summer resort. It is a stopping point on the Trent Valley canal system, and has a post office, store and pavilion.

On May 25, 1914, authority was given to expend $1,200 for the construction by day labour of floating wharves.

The work consisted of the construction of floating wharves, built of large cedar logs laying crosswise of the wharves, with flattened log stringers and then plank decking to be anchored so as to rise and fall with the waters of the Trent Valley canal system. The work commenced on May 2 and was completed by June 20, 1914.

Authority was given on October 29 to expend $25 for storing the wharves in a safe place for the winter, and replacing them after the spring freshets.

The total expenditure for the fiscal year 1914-15, was $1,243.44.

### KAGAWONG.

Kagawong is a village of about 200 in population, situated on the north shore of Manitoulin island, about 12 miles easterly from Gore bay. The surrounding country is a thickly populated and prosperous farming district, and the trade consists of the importation of farm machinery and general merchandise, and the shipping of live-stock to the number of some 3,000 head per annum, farm produce, timber and fish. All steamboats plying through the north channel of Lake Huron call regularly. It is also a tourist resort.

The object of the work is to provide a public landing wharf, as Kagawong is situated on an island, all shipping is by water and has been carried on over private wharves.

On June 29, instructions were received that an Order in Council was passed on June 22, 1914, granting authority to purchase from William Hilliard the wharf at this place for $1,000.

KENORA.

Kenora is situated on the Lake of the Woods. It is a divisional point on the main line of the Canadian Pacific railway, and is a tourist and summer resort of considerable importance.

To take care of the traffic, a wharf was built by the department in 1913 at the foot of Main street; ten electric light standards were erected on this wharf in May, 1914, at a cost of $305.17.

KILLARNEY.

This is a village with a population of about 400 situated about 25 miles easterly from Little Current, on the north shore of Georgian bay, and is a regular port of call for the local freight and passenger steamboats of the Northern Navigation Company, the Dominion Transportation Company, the steamer *Soo City* and two or three lines of United States tourist boats, besides numerous fishing tugs which make it their headquarters. The shipping comprises imports of general merchandise and the export of about 300 tons of fish, valued at about $50,000, and the total value of the trade would be upwards of $100,000.

The object of the work is to provide a passage through a shoal place in the channel leading from Georgian bay to the village. The improvements extend over a distance of 1,700 feet, having a width of 150 feet, and a grade depth of 16 feet below standard low water level.

During the year 1913, a contract was entered into with the C. S. Boone Dredging and Construction Company, Limited, of Toronto, Ont., to perform the dredging at a unit price of 32 cents per cubic yard, place measurement. The material consisted of sand and clay, and during the season, 17,247 cubic yards were dredged and scowed away a distance of about a mile, involving an expenditure of $6,256.46. Owing to the serious breakdown of the dredge *Kingsford* on October 20, 1913, work was closed for the season uncompleted.

On August 15, 1914, instructions were given that the department had authorized the extension of the date of completion of the contract to December 15, 1914.

Work was commenced on August 25, and was completed on September 5, 1914. During the season, 5,950 cubic yards of sand and clay were dredged and scowed away a distance of about one mile, and the total expenditure made during the season amounted to $2,216.11.

KINCARDINE.

Kincardine is in Bruce county on Lake Huron at the mouth of the Penetangore river, about 31 miles south of Southampton, and 34 miles north of Goderich.

It is the terminus of the Wellington, Grey and Bruce Division of the Grand Trunk railway, and has a population of about 3,000. Extensive salt deposits are found in the neighbourhood. There are several industries, salt works, furniture factories, packing house, foundry and boiler works, etc., etc.

On January 24, 1914, a contract was awarded to Mr. Wm. Bermingham for the construction of a breakwater for the approximate sum of $130,082.70 at unit rates, including dredging.

Work commenced on April 21, and was completed by September 30.

The contract called for the construction of a breakwater out in the lake 825 feet north westerly from the west end of the north pier and lying in a direction from the southwest to northeast.

This breakwater is 602½ feet long and of various widths, viz., the outer 200 has a width of 34 feet, the next 100 a width of 32, the next 200 a width of 30 feet and the innermost 100 a width of 28 feet. The extreme height above low water is 8½ feet, while the depth below water varies from 30½ to 13½ feet.

The substructure consists of cribwork anchored with stone filling and the superstructure of concrete in mass. In addition to the breakwater and the dredging of the berth, a channel leading to piers 90 feet wide, between the piers 50 feet wide and an area of 300 feet by 150 feet in the inner harbour to a depth of 16 feet below low water had to be dredged. All the above work was completed.

On May 5, the expenditure of $1,500 was authorized for repairs to the piers by day labour. This work was commenced on July 2, and was completed by October 17, 1914, and consisted of general repairs to both piers in renewing parts of decking, face piles, ties, etc.

The total expenditure for the fiscal year 1914-15 was $142,294.84.

KINGSTON.

Dredging at Kingston, consisted in cleaning out a series of slips, in most cases at the foot of streets where sewers enter Lake Ontario. Dredging was done in eight places as follows:—

1st. *Foot of Princess street.*—This work consisted in clearing out a slip over an area of 175 feet in length and 43 feet in width along the side of J. Richardson & Son's grain elevator. This work was necessary on account of the gradual filling in from a sewer at the end of the slip. There are a large number of lake grain carrying vessels using this slip. Dredging in this slip was to elevation 229.

2nd. *Foot of Queen street.*—This work consisted in clearing out a slip along the south side of one of the Montreal Transportation Company's wharves, and was over an area 580 feet in length by 55 feet in width. A sewer enters the lake at the end of this slip. Dredging was to elevation 229·0. The Montreal Transportation Company and J. Richardson & Sons handle practically all the grain transhipping business at Kingston.

3rd. *North side of the Montreal Transportation Company's elevator wharf.*—This work consisted of dredging an area 275 feet in length by 40 feet in width along the Montreal Transportation Company's elevator wharf at the foot of Barrack street. Dredging to elevation 231·0.

4th. *South side J. Richardson & Sons' elevator wharf.*—This work consisted in dredging an area of 175 feet in length by 40 feet in width between two wharves owned by J. Richardson & Sons. Dredging in this place was to elevation 229.

5th. *Crawford's slip.*—The work in this location consisted in dredging a slip between two wharves of an area of 80 feet by 80 feet, owned by R. Crawford & Company, coal and wood merchants. This slip is also used by certain passenger steamers, and in winter a number of vessels lie in it. Dredging in this place was to elevation 233·0.

6th. *Waterworks slip.*—The work here consisted of dredging a slip owned by the corporation of the city of Kingston, in front of the city waterworks. Little work could be done here beyond clearing off the surface, as the bottom was rock. The area cleared was 115 feet by 40 feet.

7th. *Foot of Bay Street.*—This work consisted in dredging a slip at the foot of Bay street between two wharves owned by S. Anglin & Company, lumber and coal dealers. A sewer entered Anglin's bay at this point, and the slip was in a very unsanitary condition. Dredging has been done by the Government in this slip on two previous occasions, about ten years and twenty years ago, respectively. The area covered by dredging was 175 feet in length and 68 feet in width and to elevation 233·0.

8th. *S. Anglin & Co.'s concrete wharf.*—This work consisted in dredging a part of Anglin's bay in front of a new concrete wharf owned by S. Anglin & Co. Anglin's bay has a comparatively small area, and there is considerable traffic in it. The area covered by dredging was 112 feet in length by 100 feet in width to elevation 229·0.

The work was let by contract to R. Weddel & Co., of Trenton, Ont., at a price of twenty-four cents per cubic yard, place measurement, except the slip on the south side of J. Richardson & Sons' elevator, where, on account of the difficulty of working in the narrow space between the wharves, the department authorized a price of forty cents per cubic yard, place measurement.

The contractor removed a total of 8,219 cubic yards, 7,916 cubic yards at 24 cents, and 303 cubic yards at 40 cents, making a total payment of $2,021.04 for dredging done. The total scow measurement was 8,995 cubic yards, and the factor of expansion 9·4 per cent. This expansion factor is very small, but is partly accounted for by conditions of dredging on the south side of J. Richardson & Sons' elevator wharf.

Work was started on August 11, and was completed on September 2.

KINGSVILLE.

Kingsville is a thriving town, situated on the north shore of Lake Erie, in the County of Essex, about 25 miles east of the mouth of the Detroit river, and on the line of the Pere Marquette railway. An electric railway line also runs through this place, between Windsor and Leamington. Population, about 2,000. It is a port of entry and a harbour of refuge. It is the centre of a very rich farming district, and is the principal point from which steamers carrying freight and passengers run regularly to Pelee island, Sandusky and Windsor. A large fishing trade is carried on at this point, the catch during the past season having amounted to 623,185 pounds. The main traffic over the dock is lumber, fence posts, farm produce, including live stock and building materials, the imports for the past season having amounted to 990,000 feet b.m. lumber, 10,000 fence posts, and 500 fish net poles. This traffic is steadily increasing. Maximum draught that vessels can draw entering this port under normal conditions, is 14 feet at low stage of water.

During the season 1913, 191 vessels with a registered tonnage of 27,874 tons arrived at the port, and the customs duties during the fiscal year 1913-14 amounted to $9,499.63.

Authority was received to make repairs, and operations were commenced on June 8, 1914, and were completed on the 18th instant.

The work performed was as follows:—

*East Landing Pier.*

(1) Complete renewal of inner end of pier for a length of 199 feet, including new pile substructure, caps, stringers, decking, and a double row of waling for length of 103 feet.

(2) Three new snubbing posts and 17 fender piles placed.

(3) General repairs to decking over remainder of pier.

*West Landing Pier.*

(1) General renewal and repairs to plank-walk near inner end of pier.

In the execution of the above work, the following approximate quantities of materials were used, namely: 2,156 lineal feet, white oak piling, 20,000 feet b.m., long leaf yellow pine; 14,000 feet b.m., white oak; 6,000 feet b.m., hemlock, and 3,000 lbs. of iron.

Expenditure, $3,498.88.

LAKE NIPISSING.

*Monetville Rock Cuts.*

Monetville rock cuts are situated 4 and 3 miles, respectively, from the village of Monetville. The work is being executed in order that navigation may be carried on between Lake Nipissing points and Monetville and avoid the four-mile haul necessary in the past.

Work of further improving the rock cuts to Monetville was carried on June 24 to August 31 and March 16 to 31.

During the summer, in Cut 1, 40 lineal feet at the Lake Nipissing end was cleaned, and drilling, blasting and excavating to grade elevation 635·5 was done in the middle half of this cut. The glance booms in Cut 2 were repaired, and rocks which had slid into cut from sides were removed. An obstructing rock about one mile above Cut 2 was blasted into deep water.

In March, 354 lineal feet of booms were built and placed in Cut 1.

Expenditure to March 31, $1,630.59.

LAKEPORT.

Lakeport in Northumberland county, is the port for Colborne on Lake Ontario and is 14 miles east of Cobourg.

On August 10, 1914, authority was given to repair the wharf by day labour.

Work was carried on from the 20th to the 24th October, and consisted of replacing a number of planks which had been torn off by gales.

Total expenditure for fiscal year 1914-15, was $15.

LEAMINGTON.

Leamington is a prosperous town situated on the north shore of Lake Erie, in the County of Essex about 37 miles from the city of Windsor on the lines of the Pere Marquette and Michigan Central railways. It is also a terminus of the Windsor, Essex & Lake Shore railway. Population about 3,000. It is the centre of a rich fruit and vegetable raising district. A number of oil wells are being worked in the vicinity of Leamington. It is a port of entry and a port of call for a steamboat line running between Windsor and Pelee island. Deep draught tugs also carry considerable freight from this point to Pelee island and other adjoining places. Maximum draught of vessels outilizing the pier is about 11 feet. The principal manufactories are basket factory, planing mill, pickle factory, tobacco factory, cement works and canning factory. During the season of 1913, 132 vessels arrived with a tonnage of 5,957 and the customs duties collected during the year 1913-14, amounted to $67,985.98.

Authority was received to repair the piers by day labour.

Operations were commenced on May 11, 1914, and were completed on February 26 1915.

The work done consisted of the following:—

About 600 lineal feet of trestle part of pier were temporarily overhauled and new caps, stringers, decking and sway braces were placed over a great portion of this section of the pier. A number of piles that were found to be rotten above L.W.L. were cut off and built up with new material.

On the crib portion of pier for a length of about 125 feet, new stringers were placed throughout and several new stringers were placed on the extreme outer end of pier.

The decking of this portion of pier was also overhauled and repaired as far as possible.

The condition of the pier on the completion of the above work is only fair, and radical measures must be taken during the coming season to put it in proper state of repair to stand the heavy traffic that goes over it.

In the execution of the above work, approximately 23,000 feet b.m. timber and 1,150 lbs. iron were used.

Plans and specifications for a rubble mound breakwater were forwarded, but owing to the lateness of the season when the plans were completed, no work has been done to date.

The expenditure for the fiscal year 1914-15, is $1,199.87.

### LION'S HEAD.

Lion's Head is in Bruce county, township of Eastnor on the Georgian bay, 21 miles northward from Wiarton, where the nearest railway station is on the Grand Trunk railway. Lumbering is the principal industry, but farming is carried on extensively through the district. Population about 500.

Authority was given on 10th July, 1914, to repair the wharf, and the work which consisted of the reconstruction of the outer end of the breakwater, which had been wrecked by the memorable storm of the 9th November, 1913, was commenced on 1st August and completed by December 1914. The portion repaired was 20 feet long and 25 feet wide and had to be faced up on sides and end with new timbers, filled with stone and decked.

The total expenditure for the fiscal year 1914-15, was $1,000.12.

### LITTLE DETROIT.

This is a point on the steamboat route through what is known as the whale-back channel of Lake Huron and is now used by lumber barges and tugs hauling rafts of logs from ports and rivers between Blind river and Spanish river, plying easterly through the Little Current channel and into Georgian bay. It is also used by a great many of the passenger boats calling at ports on the north shore of the north channel and by mail boat from Little Current and Manitowaning to Cutler on the Canadian Pacific railway. It is a narrow passage between the easterly end of Aird island and the mainland, and is within a mile of the post office of Spanish Mills, where a large lumber mill is located, and is distant westerly about 24 miles from Little Current. There is no means of establishing the volume of the trade passing through this channel, but it obviously consists of many millions of feet, board measure, of lumber, hundreds of thousands of logs, and a large tonnage of package freight. If the proposed improvements are made, the traffic will increase a great deal. The channel is narrow, although offering perfect protection from storms, strong currents are developed through it during stormy weather.

The object of the work is to widen and deepen the channel between Aird island and the township of Albert, to provide safety and convenience on this old established route of navigation.

During the winter of 1913-14, an extensive and thorough survey was made of this channel, and it was found that to provide safety to vessels passing in the channel, 4,000 cubic yards of ledge rock (gray granite) would have to be excavated. A plan of this channel was made, and on August 1, 1914, an Order in Council was passed authorizing the acceptance of the tender of the C. S. Boone Dredging and Construction Company, Limited, of Toronto, Ont., for dredging at the Little Detroit channel. The work involved in this authorization comprised the removal of 4,000 cubic yards, place measurement, of ledge rock, at a unit price of $3 per cubic yard, place measurement, class "A" material, at which rate an expenditure of $12,000 was involved, and on

November 4, 1914, authority was given to commence work at this place, but as the season was so far advanced, the contractors asked permission to delay the commencement of the work until the following season.

No expenditure, therefore, was incurred during this year.

LONG LAKE AND DRIFTWOOD CREEK.

This part of the south branch of the Blanche river in Nipissing district is located above Charlton. It is the only route of transportation available for an increasing number of settlers and prospectors.

The improvements in the river, carried on in 1913, were continued during the past season, July 1 to September 30.

The floating camps were repaired and outfit put in good order. Some brush piles were burned and 130 deadheads were removed. July 3, the plant was moved one mile up river from Charlton and cleaning channel of river started. Up to August 4, some three miles of river were improved by pulling stumps, cutting overhanging trees and removing brush. Some 1,800 stumps were taken out in this section and nearly 200 deadheads and sunken logs were removed, numerous piles of brush, etc., were burned. The sum of $1,500 was spent during this period. On August 4, the plant was moved to the head of navigation, 6 miles above Kushog lake, with the object of opening navigation through to the George Lake branch, where there had been recent gold finds, and prospectors, as well as settlers, wished to go in by water route.

About 9 miles of river was made navigable for small craft. At least thirteen jams of driftwood were partly removed and opened up to some extent, necessitating the handling of several thousand pieces of driftwood. A number of sandbars were blasted through. Owing to a great falling off of the water in August and September, it became impossible to move floating plant along with progress of work, and it was necessary to clear a trail for horses parallel with river bank. This trail was cleared for a distance of 7 miles. The sum of $2,340 was expended in improving this 9-mile section of the river. Work was discontinued at the end of September and small plant was stored at Charlton.

Expenditure to March 31, $3,841.69.

LORRAIN.

Lorrain, in Nipissing district, is located on the west shore of Lake Timiskaming, some ten miles south of Haileybury, and is an outlet for a growing farming district.

The crib-work wharf was constructed during season of 1914, and consists of a landing-head 72 feet long by 32 feet wide, with two approaches, one at each side 50 feet long by 12 feet wide.

Work was required to repair damage done to base of cribs by floating logs. The broken timbers in bottoms of three cribs were cleaned away and twelve new timbers were placed and extra stone ballast was put in during the month of September.

Expenditure to March 31, $349.09.

MADAWASKA RIVER.

The Madawaska river, in Renfrew county, flows in an easterly direction into the Ottawa at Arnprior, and affords a 30-mile stretch of navigation to boats of shallow draught.

A sand pumping plant, consisting of a scow equipped with 6 by 6-inch sand dredging pump and accessories, was constructed and placed in operation on the Madawaska river, at the foot of Lake Kiminiski, during summer of 1913. Some 2,000 yards of sand were removed at that time.

During the season of 1914, the plant was in operation in the same vicinity, July 6 to October 31.

A cut 1,031 feet long was dredged 100 feet to a width of 50 feet, and 931 feet to a width of 28 feet, and all to a depth of 6 feet. Over 5,000 yards of material was taken out.

Expenditure to March 31, $2,655.75.

MAGANATAWAN.

Maganatawan, Parry Sound district, township of Chapman, is a town situated on the Maganatawan river, 18 miles from Burk's Falls. Population, 200. It is a tourist resort, and boats operated by the Magnetawan Navigation Company ply between Maganatawan, Burk's Falls and Ahmic Lake.

Authority was given to construct a new warehouse. This work was performed by day labour, and was begun October 5, 1914, and completed November 30, 1914. The new building, as completed, is 40 feet in length, 24 feet in width, with 8-foot wall. The material used consisted of 85 feet eave trough, 20 feet connecting pipe, 11,000 feet b.m. lumber, and 15 rolls granitized roofing.

Expenditure for fiscal year 1914-15, is $542.73.

MANITOU RAPIDS.

Manitou rapids is on the Rainy river, some miles below the town of Fort Francis, where the river forms the boundary line between the Province of Ontario, Canada, and the State of Minnesota, U.S.A.

A timber pier, used for warping boats up the rapids, was damaged by fire and certain repairs were authorized. The work was started on the ice, but before completion the ice went out unexpectedly and earlier than usual, thereby increasing the difficulty and cost of the work, which was started March 5, and completed March 15, 1915.

MARKSVILLE (HILTON).

This is a village situated on the northerly side of St. Joseph island, on the north channel of Lake Huron, and is distant about 35 miles southeasterly from Sault Ste. Marie, containing a population of about 200. The countryside surrounding is, for many miles, productive and well settled. Since this is an island port, there is a fairly large waterborne traffic. The several passenger and freight boats of the Northern Navigation Company, and the Dominion Transportation, which ply through the north channel of Lake Huron from Midland, Collingwood, Owen Sound and Parry Sound to Sault Ste. Marie, make this a port of call, and in addition, two medium-sized steamboats, namely, the *City of Chatham* and the *Michipicoten* make round trips daily between Bruce Mines and other St. Mary river points to Sault Ste. Marie.

Authority was given on May 23, 1914, to expend the sum of $500, by day labour, in making necessary temporary repairs to the wharf.

Work was commenced on May 27, and it was completed on June 29, 1914. This wharf was in such bad condition that it was imperative that repairs be made at once to safeguard the public and freight passing over it.

The work consisted of building a sidewalk on the east side of the stone approach, levelling and bringing the stone approach to grade, the construction of a ramp in the face of the concrete wharf for the accommodation of small boats, and renewing of the decayed planking of the wharf where necessary. In the performance of this work some 9,025 feet b.m. hemlock lumber, 890 lineal feet of pine and cedar timber, 19 bags cement, 60 cubic yards gravel fill and 418 pounds iron and nails were used, with a total expenditure of $466.16.

MEAFORD.

Meaford is in the County of Grey, on the west shore of the Georgian bay, 20 miles west of Collingwood and 20 miles easterly from Owen Sound. It is the terminus of the Northern division of the Grand Trunk railway, and has a population of about 3,000. It has many mills and other manufacturing industries.

On May 6, 1914, authority was given for the extension of and repairs to the revetment wall on the west side of the harbour.

A contract had been let on December 1, 1913, to Messrs. N. Green and J. E. Woolrich for $30,099.52 at unit rates. Work continued from April 1 and was completed by August 30, and consisted of the construction of a northerly addition of 150 feet to a former revetment wall. The structure was of interlocking steel piles, with a concrete wall 4 feet thick for superstructure. A southerly extension of 320 feet was built of steel main piles with timber facing lying longitudinally between, and the same concrete superstructure as for the northerly extension.

On July 23, 1914, a day labour expenditure of $125 was allowed for filling in holes with brush, stone and gravel where settlement had occurred behind the old portions of the revetment wall.

On September 26, 1914, authority was given to repair and protect the eastern breakwater, which was necessitated by the damage done by the severe storm of November 9, 1913.

Operations commenced October 22 last, but were suspended on November 30 on account of the lateness of the season.

A crib was built to fill the opening in the breakwater, but there still remains to be done the placing of the crib, the construction of the concrete superstructure, and the driving of some piles at the shore end where settlement had occurred.

Total expenditure for fiscal year 1914-15, was $38,133.77.

*Dredging.*

On May 20, 1914, authority was given to have the departmental dredge *Industry* do one week's work in the harbour.

Work commenced on the 1st and continued till June 5, 1914, during which time 6,596 cubic yards, scow measurement, or allowing 15 per cent for the class of material, 5,606 cubic yards, place measurement, of coarse gravel, sand and debris had been removed. Three cuts were made at the west side of the harbour near a new 150 foot length of revetment wall put in this year and an area near the road bridge where the river washings accumulate.

The three cuts just referred to are 210, 150 and 175 feet long, respectively, all being 40 feet wide and made 20 feet deep below zero. The same depth was made at the area near the bridge for a length of 205 and width of 80 feet. This latter area fills up more or less each year by spring freshet.

MICHIPICOTEN.

This wharf is at the mouth of the Michipicoten river and serves the residents of Mission village which is situated about 1½ miles easterly on the river. The village contains about 100 people and their occupations are mostly mining and fishing. The river is not navigable. Michipicoten Harbour is a village lying some 4½ miles westerly and is the terminal of the Algoma Central and Hudson Bay railway from which large quantities of iron-ore from the Helen and Magpie mines are shipped by boat. There is a bi-weekly steamboat service at the government wharf.

Authority was given on June 12, 1914, to expend the sum of $1,000 by day labour, in constructing a standard warehouse.

Work commenced July 21, and was completed on August 15, 1914. The work consisted of building a warehouse 18 feet wide by 40 long a short distance back from

the wharf and connecting the structure with the wharf by a small platform or walk. In the performance of it some 8,883 feet b.m. hemlock, 900 pounds iron and nails, 51 gallons paint, and hardware consisting of glass, locks and hinges were used, amounting to an expenditure of $952.84.

Last year, a warehouse was built on the wharf, but during a big storm which occurred about Easter the ice was driven into the bay and completely demolished the structure, and as a store-house was necessary for the storage of freight, it was reconstructed back on the shore.

MIDLAND.

Midland is an incorporated town in the township of Tay, County of Simcoe, population 6,253.

It is a deep water port on the Georgian bay. Industries consist of saw-mills, shook mill, sash, blind and door factory and grain elevators.

The Department of Public Works has two wharves on the water front at Midland, one at the foot of King street and the other at the foot of Midland avenue.

Authority was given to make certain repairs to these two wharves and the warehouse on the wharf at the foot of King street and also for a boat landing on this wharf.

The work was carried on by day labour, and work was begun June 17, 1914, on the wharf and warehouse on King street and completed.

The material used in these repairs consisted of 46,610 feet b.m. lumber, 27,500 cedar shingles, 273 feet pipe railing and 1,399 pounds of iron.

The wharf approach on King street had the superstructure renewed on a length of 150 by 50 feet in width. The wharf at the foot of Midland avenue had 90 feet in length of deck plank renewed.

Expenditure for fiscal year 1914-15 is $2,322.19.

MONETVILLE.

Monetville is a small village at the west end of Lake Nipissing. A rapidly developing farming country surrounds it.

During the summer of 1913, construction was started on a pilework and cribwork wharf and it was completed up to the floor stringers. In July and August, 1914, work was carried on intermittently and the wharf was completed.

The wharf consists of a landing-head 72 by 48 feet with graded approach roadway and freight shed 50 by 29 feet.

Expenditure to March 31, $750.01.

MUSKOKA NARROWS.

Muskoka narrows is the only outlet to the Muskoka lake from the town of Gravenhurst, the latter located on Muskoka bay, the southern terminal of navigation.

The Narrows is used by the Muskoka Lakes Navigation Co., Ltd., also by the mill owners, who bring large blocks of logs from the Muskoka lakes to Gravenhurst. Owing to the increased development of the tourist traffic and in consequence the additional number of passenger boats placed on the route, it was found that the boat channel of the narrows was tested beyond its capacity, and by reason of same the boats or blocks of logs in transit were frequently delayed.

The object of doing this work was for the purpose of widening and deepening the channel, thereby giving increased navigation facilities for the operation of steamboats and logging operations.

The dimensions of the work accomplished are 156 feet in length, 74 in width and 10 feet in depth. The navigation conditions to the northeast and southwest of the narrows are favourable for boats having a greater draught than those at present in operation.

The whole project is completed, the work on same consisting of the removal of 1,500 cubic yards of solid rock, and the quantity removed, in place measurement, in 1914 was 300 cubic yards.

The work was performed by day labour, and the plant, consisting of 1 dredge, 2 scows, 1 tug and 1 drill-plant, was obtained from the Ontario Public Works Department without any remuneration excepting for repairs to plant.

The work was resumed on September 15, and completed October 31, 1914, the whole expenditure for that term amounting to $1,559.25.

NEWCASTLE.

Newcastle is in the County of Durham, on the north shore of Lake Ontario and on the lines of the Grand Trunk and Canadian Pacific Railways. Its population is about 1,000. Newcastle is 47 miles east of Toronto.

Authority was given on August 1, 1914, to have the departmental dredge *No. 105* work at the harbour for two weeks.

Operations commenced on August 17 and ceased on September 2, during which time 6,750 cubic yards, scow measurement, of class B material, or 4,625 cubic yards, place measurement, were removed. A cut was made along the front of the western face of the east pier and wharf for 860 feet. Commencing at a line 160 feet south of the junction of the main pier and headblock thence northerly for 400 feet with a width of 55 feet, thence still further northerly for a distance of 460 feet with a width of 25 feet. The depths were from 14 to 11 feet graduating inwards.

This work at the entrance may be obliterated at any time due to drifting sand in time of storms.

NEW LISKEARD.

New Liskeard, a town in Nipissing district with a population of 2,100, is located at the mouth of the Wahbi river, on Lake Timiskaming.

The construction of a pilework breakwater was begun January 24 last and completed April 4. The completed structure, which is 300 feet from the face of new wharf was 344 feet long at the back, 302 feet long at the face and 22 feet wide. It is built to a height of 15½ feet at the back sloping to 1½ feet at the face. The piles are driven at 7-foot centres throughout and the 10-inch by 10-inch pile-caps are spiked and shackled to the piles. The structure is sheeted with 6-inch by 8-inch timber.

On September 21, a box car on T. & N. O. railway siding, crashed into the new wharf doing considerable damage. Repairs were made early in October, consisting of splicing two broken piles, straightening five others, replacing two sets broken braces and placing a timber bumper at end of siding to prevent a like occurrence in future. At same time, two sets of broken braces at north end of wharf were replaced.

The construction of extensions to the freight shed on the wharf and to the breakwater was begun January 16, and practically completed February 13, 1915.

An extension, 48 feet long by 24 feet wide, was added to the freight shed on new pilework wharf, to provide required accommodation for larger freight traffic.

An addition of 112 lineal feet was built on southerly end of breakwater, of similar construction to the first section completed April, 1914.

Expenditure to March 31, $7,030.95.

*Dredging.*

The departmental dredge *No. 118* worked in front of the public dock at New Liskeard (Aug. 5-26) deepening basin around the wharf to facilitate the landing of boats. Two cuts 40 feet wide by 610 long, starting from outside channel running parallel with face of dock, 75 feet from it, and around the south end, were dredged to

a grade depth of 8 feet, the bottom between these cuts and dock was cleaned to give a least depth of 9 feet, and an area 65 by 50 feet at the north end of landing-head was dredged to grade of 8 feet at datum elevation 576 or winter level.

Four thousand two hundred and ninety-two yards (scow measure) clay were removed. From surveys before and after dredging, the corresponding place measure quantity is 3,395 yards and the expansion factor is, therefore, 26·4 per cent.

NORTH BAY.

North Bay, a town in Nipissing district, located on the northeastern shore of Lake Nipissing, is an important railway centre. Population 8,000.

The departmental dredge *No. 112* worked at North Bay wharf (July 21-Sept. 14) to facilitate landing of large boats at the wharf, especially during rough weather which often prevails on this lake. Five cuts, aggregating 155 feet in width by some 3,157 in length, were made, starting at a point in line with face of dock and about 150 feet southeast of corner, and running toward the club house, dredged to a grade depth of 10 feet.

Twenty-nine thousand three hundred and seventy yards (scow measure) of sand were removed. Owing to extensive silting in this locality, the soundings taken upon completion of dredging cannot be used to compare place measurement quantities.

OAKVILLE.

Oakville is in the County of Halton, on the north shore of Lake Ontario, 29 miles southwest of Toronto on the Hamilton branch of the Grand Trunk railway. It contains several mills, factories and a shipyard. The population is about 2,000.

On July 29, 1914, authority was given to expend the sum of $1,070 for repairs to piers, by day labour.

Work was commenced August 19 and completed September 21, and consisted of:—

*East pier.*—85 feet of parapet, 3½ feet high at the east side, inner end; 174 feet of parapet 1¾ feet high next on pier, including coping; 308 feet of coping, along next part of pier; 175 feet of new decking where the 1¾ foot parapet was placed; general repairs to various portions of the decking where required, and the providing and placing of 10 new mooring posts.

*West pier.*—General repairs to the decking where required; 860 feet of new coping; 84 feet of new decking including stringers at inner end; all stringers were 6 inches by 8 inches and planking 3 inches.

Total expenditure for fiscal year 1914-15 was $1,072.29.

ORILLIA.

Orillia, township of South Orillia, County of Simcoe, is a town with a population of about 7,000. The Grand Trunk, Canadian Pacific and Canadian Northern railways have stations and yards in the town and a large amount of freight is handled per annum.

Among other industries there is a wagon factory, box factory and many others of large capacity chiefly operated by electricity, generated at Ragged rapids on the Severn river. The tourist traffic between Orillia and all points on Lake Simcoe is large and increasing annually.

Authority was given to place capping on the new wharf and carry pipe along the wharf for lighting purposes, also for placing seats on the town park wharf.

Work was begun by day labour May 24, 1914, and completed June 17, 1914. The materials used consisted of 6 park seats and 1,700 feet, b.m., tamarac capping.

Expenditure for fiscal year 1914-15, $210.55.

*Park Wharf.*

The Department of Public Works erected a wharf of concrete superstructure at Couchiching park in 1902, and a wharf of crib substructure and concrete superstructure at the foot of Mississaga street in 1912.

Authority was given to expend the sum of $100 for the removal of two old cribs adjacent to the Couchiching park wharf.

The work was done by contract. On May 8, 1914, the offer of Mr. N. J. Harvie was accepted for the removal of the two old cribs for the sum of $85, and on June 5, 1914, the work was completed to the entire satisfaction of all concerned.

Expenditure for fiscal year 1914-15 is $85.

OTTAWA.

Ottawa, in Carleton county, and the capital of Canada, is situated on the south shore of the Ottawa river about 125 miles from its mouth. Population, 100,000.

A large shoal of sawdust and slabs was piled up in the channel of the Ottawa river, near the centre pier of the Alexandra bridge between Ottawa and Hull, during the period when mills at the Chaudiere dumped mill refuse into the river. A small amount of dredging was done in this shoal by departmental dred *No. 113,* October 24-November 7. It was found that a dipper dredge cannot work expeditiously in this material.

Three thousand one hundred and ninety-five yards, scow measure, slabs and sawdust were removed.

It is estimated to provide a grade depth of 10 feet through the shoal which would necessitate the removal of some 100,000 yards, or two season's work for a properly equipped plant.

*Rideau Canal Entrance.*

The departmental dredge *No. 113* was employed at the foot of the Rideau canal, November 9-November 20, removing abandoned boat hulls, which were an obstruction to navigation as well as being very unsightly at this point on the river. Three steamboat hulls and one old barge were torn in pieces and removed from the north bank and an old coal scow on the south bank was also removed.

Besides the material which floated away, 2,070 yards were removed in scows.

OWEN SOUND.

Owen Sound in the County of Grey, is at the mouth of the Sydenham river which flows into the head of Owen sound, an arm of the Georgian bay. The Grand Trunk and the Canadian Pacific railways have terminals here, and the shipping by water to the upper lakes both in freight and passengers is large. There are many extensive manufacturing concerns, and a large summer tourist traffic is attracted by the natural and artificial scenic surroundings. Population, 12,000.

An expenditure of $35,000 was authorized by your letter of May 6.

A contract had been let to Messrs. Bishop and Buchanan on July 21, 1912, amounting to $54,785 for the completion of a revetment wall on the west side of the harbour.

Work was resumed April 13 and completed August 25 and consisted of a revetment wall of pile bents with sheeting in the back for the substructure and a concrete decking covering an area 673 feet long by 20 feet wide.

Some slight alterations were made to the original design by adding five slips.

Authority was given May 5, to repair the revetment wall south of the last mentioned works on the west side next the highway bridge at Division street for a length of 448 feet northwards at a cost of $1,200.

The work consisted of repairing the face of the concrete superstructure just above the water line where it had been eroded by the action of the water. The waling was renewed in places and an old iron hand rail was removed, it proving to be an obstruction rather than an assistance.

Total expenditure for the fiscal year 1914-15, was $56,710.60.

*Dredging.*

Authority was given on 4th of June, 1914, to extend the basin in front of the Union Cement Works' wharf to facilitate the turning of larger vessels and thereby save time in unloading.

Work was commenced by the departmental dredge *Industry* on June 9, and was completed on June 17, 1914, during which time 11,785 cubic yards, scow measurement, or 8,250 cubic yards in situ, allowing 43 per cent expansion, of sand, gravel and a small amount of clay were removed to a depth of 15 feet below low water level.

The cutting was made, commencing at a point 75 feet out at right angles from the extreme southwest angle of the pier, thence running southwesterly for 640 feet at a width of 40 feet. At the westerly end of this cut a square covered area 80 feet by 100 feet was taken out, the southerly side of said square being in prolongation of the east face of the cement company's wharf extended. There was also an addition to the north side of the 40-foot cutting of 200 feet by 20 feet. The three-cornered area enclosed between these cuts, the pier and wharf was dredged in the fall of 1912.

Further permission was given on 18th June to do 4 days' work at the landing pier of the King's Royal park, a large and popular summer resort. This work was for the purpose of permitting large passenger steamers to land their passengers at the park, which without the dredging would have been impossible.

There were two cuts made; one to the west side of the pier, 325 feet long by 40 wide, and lapping the end of the pier some 105 feet. This cut was dredged to a depth of 16 feet, but the material was overcast, and, being of a quicksand nature, partially refilled the cutting to 11-foot depth. The second cutting, which was 225 feet long and 40 feet wide, was made directly out from the southerly or outer end of the pier to a depth of 16 feet below low water level. In addition to the cutting, numerous old piles which had helped to form bents of the outer end of the pier before it was damaged by the storm of the 9th November, 1913, were also renewed.

Work commenced on the 18th, and was completed on 22nd of June, 1914, during which time 8,525 cubic yards, scow measurement, or 5,970 cubic yards in situ, of sand was removed.

This park is about three miles up the west shore of Owen Sound, from the harbour of the same name, and this is the first time any dredging has been done.

The depth obtained at the cement works should remain for years, but at the Royal park there is liability of the cuts filling in rapidly.

PARRY SOUND.

Parry Sound, District of Parry Sound, is a town situated on the east shore of the Georgian bay, population 3,500.

Principal business consists of lumbering, manufacture of charcoal and chemicals, also a reducing works. Parry Sound is the county seat of the district.

The Grand Trunk, Canadian Pacific, and Canadian Northern railways have stations and freight houses and yards, and carry on a large business. The Northern Navigation Company's boat *Waubic* plies between Penetanguishene, Honey Harbour and all intermediate points to Parry Sound, making double daily trips.

The tonnage in and out by vessels in 1914 was 110,630, and custom receipts were $26,091 for 1914.

On October 21, 1913, a contract was awarded R. Robinson, F. L. Walton and Geo. White for the construction of a wharf and approach at a point on the shore opposite the plant of the Standard Iron Company, for the lump sum of $72,000.

The wharf is 300 feet in length, 26 feet in width, with wooden substructure and concrete superstructure. The stone approach is 220 feet in length and 115 in width.

Work was begun on January 19, 1913, and continued until November 30, when operations were stopped for the season.

On June 10, 1914, work was again resumed, and finally completed September 25. The unfinished work consisted of the moulding and placing of concrete blocks, mass concrete, stone filling between the concrete walls and placing the waling on the outside face.

The object in building this wharf was for the purpose of affording shipping facilities to the Standard Chemical Company and the public.

Total expenditure for fiscal year 1914-15 is $20,784.63.

PELEE ISLAND.

Pelee island is situated at the western end of Lake Erie in lat. 41° 46 N. long. 28° 15′ W; about 35 miles southeast from the mouth of the Detroit river and 16 miles south of the town of Kingsville, Essex county. Population of the island about 650. Its products are grapes, fruit, wine, tobacco and farm produce. The soil is particularly rich and fertile. A large number of hogs are raised. Owing to the isolated position of the territory, the docks of this island are of great importance and service to the inhabitants. For some years past, a regular line of steamers has called between three and four times a week at these docks when weather permitted. It is a port of entry and the revenue is steadily increasing. During the current fiscal year, the customs revenue collected at the west dock amounted to $965.

Authority was received to repair the docks by day labour.

*North Dock.*

The work performed between January 11 and March 9, consisted of the following: The inner 5 piers were raised 20 inches by adding 8 new 10 by 10 face timbers to each pier and the spans between said piers have all been renewed with new decking and stringers throughout. In addition, the cribs were filled to the new level and the whole pier is now in good condition.

*West Dock.*

The work performed between December 19, 1914, and January 29, 1915, consisted of the following: For a length of 150 feet of the inner end of pier, 3 tiers of new face timbers were placed on each side and for the next 135 feet, 4 tiers of face timbers were put in place, including 20 new cross ties. From the outer end of the dock for a length of 50 feet, one tier of new face timbers was added at both sides as well as on the outer end.

New stringers and bed timbers were placed under the warehouse and two new mooring posts were placed on pier. In all, twenty-five cords of stone filling were used. This pier is now in first-class condition.

In the execution of the above work, approximately 22,000 feet b.m. of timber and 1,525 lbs. of iron were purchased during the current fiscal year.

The expenditure for both docks for the fiscal year 1914-15, is $1,999.31.

PEMBROKE.

Pembroke, a town in North Renfrew with a population of 5,600, is located on the south shore of the Ottawa river 104 miles west of Ottawa on the Canadian Pacific railway, also a terminus of Grand Trunk railway and on the line of the Canadian Northern railway under construction.

The department was requested by people using Pembroke wharf to place electric lamps on it, to facilitate landing of boats after dark. The Pembroke Electric Light Company offered to instal four lights, fully equipped, for the sum of $425. This offer was accepted and the lights were installed satisfactorily.

Improvements were made to the wharf, April 22 to 30 and July 11 to 16.

In April, six new fenders, 12 by 12 by 16 feet were placed to improve landing for boats, and minor repairs were made to niggerheads. In July, at request of Navigation Company, four more fenders were placed at north-west and south-west corners of wharf, and further drifting was done to lower ends of fenders placed in April. All the new fenders were painted.

Expenditure to March 31, $662.90.

PETERBOROUGH.

Peterborough, in the County of Peterborough on the Otonabee river and Trent Valley canal system, has a population of 17,000. There are many important manufactures, viz., the Quaker Oats Company, the Peterborough Cordage Company, the Canadian General Electric Company and many others that take advantage of the water power development of the river. The Grand Trunk railway has several branch lines from here and it is on the main line of the Canadian Pacific railway.

During 1913, $2,500 was authorized for the construction by day labour of a closed in pavilion on the wharf at the foot of George street, for the convenience of travellers on the Trent Valley canal system. Work was started and well advanced during the same year but was not completed.

Work was resumed on June 19, and was completed by August 8.

This year's comprised the placing of cresting, windows and doors, painting, and completion of the plumbing.

Total expenditure for fiscal year 1914-15 was $706.46.

PICNIC ISLAND.

Is an island lying to the north of Manitoulin Island, in the District of Algoma, about 1½ miles west of the town of Little Current, on the main steamship channel of steamboats plying through the north channel of Lake Huron.

The object of the work is to improve the general trade route of the north channel of Lake Huron. The principal governing conditions in the way of shoal water on this route are found in the neighbourhood of Little Current. The portion of the channel opposite Picnic island, which is being improved is about 5,000 feet long by 500 wide, and the grade depth is 22 feet below standard low water level. All work done at this point will be of a permanent nature and there will be no refilling, nor will any charge for maintenance and redredging be necessary.

On June 11, 1910, a contract (No. 7816)) was entered into with the C. S. Boone Dredging and Construction Company, Ltd., of Toronto, Ont., to do a certain dredging at the prices of $1.75 per cubic yard, scow measurement, for class "A" material. During this season, some 28,350 cubic yards of limestone rock were removed, for which estimates were returned amounting to $49,612.51.

On June 16, 1911, instructions were given to resume the dredging at the contract price. It was suspended on October 20, and during the season 37,460·4 cubic yards of rock were dredged, for which estimates were returned in favour of the contractors amounting to $65,555.70

On September 7, 1911, this contract was extended to include the dredging of an additional quantity of 140,000 cubic yards, scow measurement, of limestone rock, at the unit price of $1.70 per cubic yard, scow measurement.

This followed the discovery during surveys of additional shoal areas lying in the course of the proposed channel, immediately east of the area under contract. Drilling and blasting was commenced on this extension, but no material was removed. (See report of Minister of Public Works for the fiscal year ending March 31, 1912, page 213.)

On May 15, authority was given to resume the dredging for the season at the unit price for the extension work, namely, $1.70 per cubic yard, scow measurement. It was suspended on November 4, and during the season, 60,093·6 cubic yards, scow measurement, of rock were removed, for which estimates were returned in favour of the contractors amounting to $102,159.12.

On May 3, 1913, the dredging was continued, at the same unit price as paid the previous year, namely, $1.70 per cubic yard, scow measurement, at a cost not to exceed the appropriation of $97,137.63.

It was suspended on November 15, 1913, during which period, 56,495·4 cubic yards, scow measurement, were removed, for which estimates were returned in favour of the contractors amounting to $96,042.18.

Work was resumed on May 13, 1914, in accordance with the terms of the extension of the contract, the total expenditure not to exceed the appropriation of $100,000.

It was carried on without unusual incidents throughout a favourable season, until November 3, when it was suspended. During this time, 57,167·25 cubic yards, scow measurement, were removed, but a careful survey over the completed portion of the work proved that dredging had been performed below the allowable subgrade depth to the extent of 11,264·25 cubic yards, scow measurement, so this quantity was deducted, and the total season's dredging returned in the progress estimates to be paid for was 45,903 cubic yards, scow measurement, amounting to the sum of $78,035.10.

In order to bring a portion of this improvement into early use, the contractors were required to finish a strip of it 100 feet wide throughout the length of the shoals. They were successful in doing this and arrangements have been made to have it buoyed out for general navigation in the spring of 1915.

A summary of the work to date is as follows:

| Year. | Quantity dredged. | Price per c.y. | Amt. estimates. |
|---|---|---|---|
| 1910-11..... | 28,350.0 cubic yards. | $1 75 | $ 49,612 51 |
| 1911-12..... | 37,460.4 " " | 1 75 | 65,555 70 |
| 1912-13..... | 60,093.6 " " | 1 70 | 102,159 12 |
| 1913-14..... | 56,495·4 " | 1 70 | 96,042 18 |
| 1914-15..... | 57,167.25 " | 1 70 | 78,035 10 |
| | 239,566·65 " | | $391,404 61 |

NOTE.—On account of excess dredging in the completed area, amounting to 11,264·25 cubic yards, the total quantity returned on estimates to be paid for is 228,302·4.

### PIKE CREEK.

Pike Creek is a village on the south shore of Lake St. Clair, and is situated on the London and Windsor division of the Grand Trunk railway. It is 10 miles east of the city of Windsor, and has a population of about 200. The principal industry is farming, although considerable fishing is done.

Under dates of May 5 and June 12, authority was received to make repairs to the docks by day labour.

Work was performed between September 4 and November 23 last, and consisted of the following:

*East Side.*

The crib-work for a length of 40 feet was sheeted on its rear face, back-filling was placed, and this section of crib was decked.

*West Side.*

Sheet piling was driven for length of 54 feet at inner end of old sheeting and 88·5 feet of old face timbers were reinforced by sheeting driven in rear of same. General repairs were made to decking of crib and about 75 cubic yards of back filling were placed.

In the execution of the above work, approximately 6,406 feet b.m. white oak timber and piles and 3,000 pounds of iron were used.

The expenditure for the fiscal year 1914-15, is $649.85.

POINT EDWARD.

Point Edward is a village situated at the head of and on the easterly side of the St. Clair river, in the County of Lambton, adjoining the town of Sarnia, and is 61 miles west of London. It is a terminus of the Grand Trunk railway, a port of entry, and is the principal port of call for the five steamers of the Northern Navigation Company, which load and unload at the Grand Trunk Railway Company's spacious freight sheds. An extensive unloading plant is in use in connection with the unloading of iron ore for the Hamilton Iron and Steel Company. It is one of the most important points of shipment for manufactured goods from the east to the west, and a quantity of timber and coal was brought in during the fiscal year. Population, about 1,000.

An extensive fishing trade is carried on, the value of the fishing catch during the past season being approximately $60,000.

During the season 1913-14, 612 vessels arrived having a total registered tonnage of 509,034 tons. The customs revenue for the current fiscal year was $31,208.40.

*Dredging.*

During the past season, 92,742 cubic yards, scow measurement, of sand, gravel and silt were removed from the River St. Clair opposite Point Edward and Sarnia.

Of this quantity, 41,317 yards, scow measurement, of silt and light sand were dredged by government dredge *Ontario* under authority dated May 28, in removing a heavy shoal that had formed over an area adjacent to the Northern Navigation Company's docks at Point Edward. In addition, 10,000 yards of silt and light sand were dredged by the steam barge *Cadwell* of the Cadwell Sand and Gravel Company in work performed over the same shoal.

The remainder, that is 41,425 yards, sand and gravel, was dredged by this company in accordance with Order in Council passed April 27, 1910, granting the above company the exclusive privilege of dredging the material required to be removed in order to provide and maintain a depth of at least 21 feet of water opposite the docks at Point Edward, on condition that the said company would be allowed to dispose of the dredged material for its own purposes.

The operations of the government dredge *Ontario* or *No. 114*, extended from May 29 to September 2, while the operations of the Cadwell Sand and Gravel Co., extended from April 2 to November 16, 1914.

The objects of this work were:—

(a) In particular, the removal of shoal alongside the Northern Navigation Co.'s dock to provide a safe depth of 20 feet below L.W.L. for navigation.

This shoal lay within the limits of area covered by agreement, but it was found impossible to make satisfactory arrangements for its removal by the above company. Later the company agreed to and carried out the removal of 10,000 cubic yards as above stated.

(b) In general, the removal of sand and gravel shoals over the area covered by above agreement, to a depth of 22 feet below L.W.I.

No check was possible of the quantity of material removed by place measurement over the general area dredged, but it was found by survey that the quantity removed over the main shoal, namely 51,317 cubic yards scow measurement, was represented by 33,498 yards place measurement, the resulting expansion factor would therefore be 53·19 per cent.

The agreement with the Cadwell Sand and Gravel Co. of April 27, 1910, automatically expired with the closing down of this season's operations and new arrangements must now be made for the performance of future dredging in this locality, which is annually required.

As an indication of the dredging requirement at this port, it might be stated that the total quantity of material removed by dredging during the past five years is 275,250 cubic yards scow measurement. Of this quantity 228,025 yards was removed by the above company under the terms of its agreement with the department. 5,908 yards were removed by contract in 1910 and 41,317 yards were removed by the government dredge during the past year.

### PORCUPINE.

Porcupine, a mining town on the Porcupine branch of the T. & N. O railway, is situated at the north end of Porcupine lake.

A pilework wharf, approach 12 by 240 feet long and landing-head 33 by 40 feet were built in the summer of 1912. During the ice shove in the spring of 1913, the structure was almost completely destroyed. Repairs and improvement were made to the wharf in 1913.

Further necessary improvements were made August 21 to 29, 1914.

Two-inch sheeting was placed around wharf, another crib was placed in the approach and those placed last year were made more secure by extra drifting to piles.

Expenditure to March 31, $430.36.

### PORT ARTHUR.

Port Arthur, District of Thunder Bay and Rainy River, with a population of 20,000, has a fine natural location on the shore of Thunder bay at the northwestern end of Lake Superior. It has a frontage on the lake, within its present limits, which admit of considerable extension, of seven and one half miles. It is the Lake Superior terminus of the Canadian Northern Railway and is on the main line of the Canadian Pacific Railway; it is a port of entry for the passenger fleets of the Canadian Pacific Railway and the Northern Navigation Company and for passenger steamers from Duluth.

Port Arthur, with Fort William, which directly adjoins it on the south, forms the western terminus in Canada for the Great Lakes navigation, is therefore one of the most important Canadian ports. Through it a considerable portion of the western grain crop is handled for transhipment east. For this purpose, there are six elevators, one built and operated by the Board of Grain Commissioners for Canada. The total storage capacity is 16,000,000 bushels. Large quantities of coal, rails, structural steel, farm implements, cement and package freight of all kinds are landed also for western transhipment.

In Port Arthur are located, among others, the plants of the Canadian Northern Coal Dock Company, the Atikokan Iron Company, the Pigeon River Lumber Com-

pany, the Port Arthur Waggon Works and the Western Dry Dock and Ship Building Companies, the latter capable of accommodating the largest vessels. It is also the centre of a large lumbering industry a great deal of which is handled by water.

*Dredging.*

To afford proper facilities for this traffic, a general plan of improvement and enlargement has been laid down, outlined to meet both present and future needs. This plan really provides for a large inner harbour dredged throughout to a depth of 25 feet and protected by breakwater, the work to be carried out systematically as occasion demands.

In accordance with this plan, a contract was let early in the summer of 1913 to W. E. Phin, Esq., Hamilton, Ontario.

This contract provided for the removal of 942,000 cubic yards, scow measurement, of class "B" material from the main harbour at a unit price of 13 cents.

At this time, the main harbour south, between the Canadian Northern Railway elevator "B" and the Thunder Bay elevator, was dredged to a width of 1,175 feet over the northern half while the width of the southern half was only 585 feet. In 1913 this southern half was widened to 1,225 feet.

In 1913, the new government elevator and the Davidson & Smith elevator were in process of completion, as was the joint slip between them. Consequently, a triangular piece 2,300 feet long, with a base of 490 feet, was dredged at that end of the main harbour south to give access to these plants.

The dipper dredges *Kennaquhair* and *Chief* working under the above contract, performed this work, removing altogether 528,794 cubic yards, scow measurement, sand and clay, class " B " material, during 1913.

Work was resumed, on this contract, May 11th, 1914, under authority dated April 23rd, 1914. During the season, the following work was done:—

The main harbour south was widened from a width of 1,175 feet at the north end and 1,225 feet at the south end to an average width of 1,450 feet throughout its entire length, a distance of 4,700 feet.

The main harbour centre was enlarged at its narrowest part, namely, immediately in front of the south part of the " Old Breakwater," by dredging an area approximately 800 feet long and 150 feet wide.

The depth dredged in these sections was 25 feet plus 1 for sub-grade. The quantity excavated was 364,075 cubic yards, scow measurement, class " B " material. The place measurement quantity computed from soundings, is 327,649 cubic yards, giving an expansion factor of only 12%. This is probably due to heavy compact material.

King's channel was straightened at its northwestern end by dredging a cut 1,200 feet long on an average width of 45 feet. The depth dredged was 25 feet plus 1 for sub-grade. The quantity removed was 24,850 cubic yards, scow measurement. The place measurement quantity is 18,560 cubic yards, giving an expansion factor of 25%.

In addition, re-dredging was done in the slips at King's elevator, the Canadian Northern elevator " A," and the joint slip between the Davidson & Smith elevator and the Government elevator and along the face of the Canadian Northern Railway coal and ore dock.

The depths made ranged from 20 to 25 feet depending on the original depths of the slips. In this connection it might be pointed out that all these slips are on privately owned water lots and inside the harbour line. These slips will have to be re-dredged from time to time but the dredging over the extended areas is practically permanent.

All depths mentioned refer to zero of the Public Works Department staff gauge which is 601·86 M.S.L. The water during the navigation period is practically always above this zero level.

All the material removed was class ' B." consisting entirely of sand and clay in varying proportions, none of which was difficult to handle.

Only one dredge, the *Kennaquhair*, was employed during 1914; the average haul was approximately 2 miles and the protection from storms good. Releases were secured from the owners of all wharfs, etc., alongside which dredging was carried on.

Work was closed for the season on October 1, 1914, 416,410 cubic yards, scow measurement, class "B" material, having been removed and the contract completed.

During January, February and March, 1915, the necessary soundings were taken, on the ice, over the areas dredged. The work being found satisfactory, a final estimate was submitted March 12, 1915, covering the work done during both 1913 and 1914.

There were no special features in connection with this work and its proximity to other points where work was being carried on rendered close supervision easy. It might be mentioned, however, that the dredging at the north end of the main harbour south included the removal of certain timber, stone riprap, etc., that originally formed part of the old timber breakwater removed in 1909 and 1911. An allowance was made the contractor for this work, as provided for under clause 3 of the specification.

In conclusion, would state that the harbour is in very fair condition at present as regards dredging although the general plan of improvement could be carried out uninterruptedly with the very best results.

Total expenditure during the fiscal year 1914-15, $54,629.30.

*Bare Point Breakwater.*

During 1914-15, the work on the rubble mound breakwater at Bare Point, Port Arthur, was continued, a second extension to the new breakwater was commenced and certain dredging was carried on. All these works were part of the general plan of improvement and enlargement outlined to meet the increasing needs of Port Arthur harbour.

This work is a breakwater of the rubble mound type starting at Bare Point near the north end of the city and running in a southerly direction. It has a length of 3,200 feet, a width at the water line of 48, a top width of 24 and a height above water of 8 feet and is composed of two classes of stone, a core of quarry run and a covering course of large rubble stone ranging from 4 to 10 tons and upward. The depth of water varies from 10 to 29 feet and the bottom consists of sand and very soft blue clay.

This contract was let to the Thunder Bay Contracting Co. in the autumn of 1911, and has been carried on steadily ever since during the open or working seasons. In the spring of 1914, there remained some 900 lineal feet at the outer end to bring from approximately 12 feet below water level to the finished section, as well as removing track from and rounding off the remaining 2,300 feet.

Operations were resumed for the season on May 11, 1914, and owing to weather conditions the work was discontinued for the season on November 14. During this period, the outer 900 lineal feet was brought above water, and 200 lineal feet completed. The track must be removed from the remaining 3,000 feet and the top rounded off before the structure is accepted.

The work was carried on by train-fill from a temporary trestle, and would have been completed during 1914 but for unexpectedly heavy settlement. It should be completed about August, 1915.

During January, February and March, 1915, close soundings were taken on both sides of the breakwater throughout its entire length, so that cross sections could be plotted and an accurate determination made of the effect produced, under water, by the extensive settlements that took place. This work will be of great benefit in connection with any further work of this kind.

During 1914-15, the following quantities of stone were placed in this breakwater:—

| Material. | Quantity. | Unit Price. |
|---|---|---|
| Stone. | Tons. | S cts. |
| Class 1.—Core—Quarry run | 103,420 | 80 |
| Class 2.—Rubble stone ¼ to 16 tons | 33,557 | 1 10 |
| Total | 136,977 | |

Total expenditure for fiscal year 1914-15, $109,007.83.

*New Breakwater.*

The second extension to the new breakwater is a southeasterly extension, on the same centre line, of the first extension constructed in 1913. An entrance, 375 feet wide, known as the south entrance, has been left between the two extensions, to give access to this part of the harbour.

The contract for this work was let to the Port Arthur Construction Co., of Port Arthur, in the spring of 1914. This contract calls for a breakwater consisting of timber cribwork on a pile foundation, with a concrete superstructure, the whole riprapped on both sides. It will be, when completed, 2,540 feet long, 30 wide and 8 feet above water level at zero of gauge, or 601·86 M.S.L.

Work was authorized on April 9, 1914. The pile foundation was started on May 22, and finished September 18, 1914. During this time 3,301 piles, lengths 35 to 60 feet, were driven to a secure foundation and cut off at 18·5, 20·5 and 22·5 feet below water level. The depth of water in which this work was carried on was 26 feet, and the bottom consisted of sand and soft blue clay overlying firmer material.

The work of driving and cutting the piles was done from floating pile drivers working to carefully set ranges. All elevations for cutting the piles were given instrumentally.

On June 5, crib building was commenced, and by October 14 all the cribs, 26 in number, were completed, as follows:—10 cribs 100 by 30 by 22·5 feet, 7 cribs 100 by 30 by 20·5 feet, 8 cribs 100 by 30 by 18·5 feet, and 1 head-block crib 80 by 40 by 22·5 feet. This required 3,400,000 feet b.m. of B.C. fir. The sizes were principally 10 by 12 and 12 by 12.

Of these, the headblock crib and six others were sunk in place, filled and riprapped and the headblock and 160 lineal feet of the main portion covered with the concrete superstructure. This work extended from July 13 to November 16, 1914, on which date operations were suspended for the season.

This contract should be completed, without trouble, during 1915.

Total expenditure for fiscal year 1914-15 is $258,350.56.

PORT BRUCE.

Port Bruce is a village situated at the mouth of Cat Fish creek in the County of Elgin, on the north shore of Lake Erie, about 10 miles east of Port Stanley and 10 miles south of Aylmer, the nearest railway connection. Population about 150. Surrounding country is a rich farming district. The principal industry is fishing, in the pursuit of which it ranks as an important place.

Authority was received to repair the piers, and which authority was supplemented by letter dated June 12 authorizing the expenditure of the remaining five-sixths of the grant. Operations were commenced on July 29 and closed down on November 28, 1914.

The work performed consisted of the towing out from the turning basin in the inner harbour to the berth prepared for same at outer end of the west pier, of a close-faced timber crib 100 feet long, 20 feet wide and 17 high, which had been constructed during the previous season, and the filling of the crib with stone.

Six additional courses were then added to crib after which it was filled with gravel from L.W.L. up and it was then decked.

In the execution of the above work, the following materials used were purchased during the previous year: 27,000 feet, b.m., timber, 3,100 lbs. of iron.

The expenditure for the fiscal year 1914-15 is $992.20.

*Dredging.*

Under authority dated June 12 and 22, 13,350 cubic yards, scow measurement, of clay, silt and sand were removed by the government dredge *Sir Richard, No. 120,* from the channel between piers and at the entrance to channel, during the past season.

Operations extended from July 2 to 31, 1914.

The object of this work was to dredge a channel from the inner end of harbour to the outer end of the west pier of such depth that a new timber section of this pier, 100 feet long and 20 feet wide, might be floated out from the inner harbour to its location at the outer end of pier. This work was performed, including the dredging of the required depth.

The result of the dredging was that a channel approximately 30 feet in width, having a depth of 13 feet below L.W.L. over a small part of the harbour in turning basin, and 15 feet below L.W.L. over the remainder of the work between piers, was obtained.

The actual safe depth for navigation in this harbour is not more than 9·5 feet on account of the existence of a shoal across the outer entrance to harbour. This shoal is proposed for removal during the coming season, and it is hoped that the extension to the west pier, above referred to, will effect a considerable reduction in the annual charges for dredging.

PORT BURWELL.

The village of Port Burwell is situated at the mouth of Otter creek, on the north shore of Lake Erie, 22 miles east of Port Stanley. It is the terminus of a branch of the C. P. railway. It is a harbour of refuge and is distant 51 miles from the port of Ashtabula, Ohio, and with which place an extensive traffic is carried on. The car ferry operated between this port and Ashtabula by the Pennsylvania Ontario Transportation Company brought in 7,152 cars during the season of 1914, with a tonnage of 313,135 tons. This quantity included 250,319 tons of coal for railroad fuel, 45,725 tons for commercial purposes, and 16,991 tons of general merchandise for commercial uses. In addition, the car ferry delivered to the Pennsylvania Company at Ashtabula, 50 cars with tonnage of 1,163 tons of general merchandise. Customs duties collected during the fiscal year 1913-14, amounted to $203,441.04.

A small fishing trade is carried on from this point which amounts annually to approximately $75,000 in value.

Population, about 600.

Authority was received to repair the piers by day labour, and operations were commenced on April 2, 1914, and closed down on January 30, 1915.

The work performed consisted of the following:

*East pier.*—Section of decking renewed, 10 by 20 feet.

*West pier.*—Section 376 feet long renewed by placing new face timbers from 2 to 5 feet high, renewal of defective cross ties, renewal of decking for a length of 259 feet, the decking being replaced for a length of 117 feet, and placing seven new snubbing posts.

*Sheet pile wall,* between breakwater and west pier.—The reconstruction of the easterly 105 feet of this pile wall.

*Breakwater.*—The concrete superstructure at inner end of this breakwater for a length of 100 feet was repaired by M. J. Hogan at his own expense, having been constructed during 1912 and 1913 and accepted from the contractor on October 6, 1913.

Owing to settlement having taken place under the inner crib of breakwater, and although there was no obligation on the part of the contractor to perform the repairs in question, Mr. Hogan, on hearing of the settlement, at once took the matter in hand of his own accord.

In the execution of the above work, approximately 24,300 feet b.m. timber, 30,000 feet b.m. white beach piling, and 2,800 pounds of iron were used.

In addition, 12,000 feet b.m. of 10 by 10 by 30-foot white beech were purchased, and will be placed in the work during the coming season.

During the coming season, a further expenditure will be necessary in connection with the reconstruction of pile wall between the breakwater and the west pier, and in performing the necessary dredging between piers and in outer channel.

Expenditure during the fiscal year 1914-15, is $16,713.20.

*Dredging.*

During the past season, a total of 87,300 cubic yards, scow measurement, of silt, clay and sand was removed in widening and deepening the outer entrance channel, the channel between piers in turning basin and in Otter creek at inner end of the harbour to the north of check water.

The work was performed by government dredge *Sir Richard No. 120,* working between June 12 and 27 and August 1 and September 8, and by the dredge *Meade* under contract with the C. S. Boone Dredging and Construction Company, Limited, between June 17 and October 6, 1914.

Authority for work performed by the former dredge was received under date of June 12 and for the latter, under date of June 17.

Of the total amount removed, the government dredge removed 24,800 cubic yards, scow measurement, and the C. S. Boone Dredging Company removed 62,500 cubic yards.

The dimensions of the completed work were as follows: Outer entrance channel for a width of 145 feet to the west of range light at the southwest of breakwater, minimum depth 18·7 feet; from the outer end of breakwater to the outer limits of the east and west piers, and for a width of 205 feet to the west of range light, minimum depth 18·7 feet; outer entrance channel for width of 35 feet to the east of range light, minimum depth, 16·7 feet; channel between piers and turning basin, minimum depth 17 feet; Otter creek from checkwater north to town wharf, minimum depth 12 feet. Total quantity, 24,800 cubic yards, scow measurement; 16,776 cubic yards, place measurement, resulting expansion factor 47·8 per cent.

On the work performed by contract, the following comparison was found, namely; total quantity, 62,500 cubic yards, scow measurement; 44,190 cubic yards, place measurement, resulting expansion factor 41·4 per cent.

Owing to the very light and shifting character of bottom, particularly in outer harbour, shoals are constantly formed during the progress of work by the action of

storms and the propellers of car ferry operating at this port and it is very difficult to obtain a satisfactory comparison between the place and scow measurement quantities removed.

During the coming season, a special effort will be made within the limitations of our staff, to cover this point.

The cost of the work performed under contract was as follows:—

| | |
|---|---|
| 62,500 yards at 19⅞ cents | $12,421 88 |
| Inspection | 297 35 |
| Total | $12,719 23 |

It is most probable that further dredging will be required during the coming fiscal year.

PORT COLBORNE.

Port Colborne is in the County of Welland on the shore of Lake Erie, at the entrance to the Welland canal. It is therefore important in the way of shipping, and grain is transferred by means of the large government elevator in the extensive harbour. It is tapped by several railways, the Grand Trunk, Wabash, Michigan Central and a radial line running northerly to Welland, etc. Population, 1,400.

Authority was given to repair the head-block of the east breakwater by day labour.

Work commenced on July 13 and was completed November 30 and consisted in extensive repairs to the head-block of the eastern breakwater, which had some time previously been severely damaged by a vessel running into it, and subsequently by storms as there was delay in carrying out the repairs.

The superstructure was reconstructed with a parapet wall 75 feet by 44 feet by 30 feet and a counterfort 50 feet by 25 feet. The new work, all in concrete, was connected with the undamaged portion of the structure, and a talus stone protection was placed around the head-block.

Total expenditure for fiscal year, 1914-15, was, $24,301.76.

PORT ELGIN.

Port Elgin, in the County of Bruce, is on the shore of Lake Huron, 5 miles south of Southampton and 56 miles north of Kincardine on the Wingham, Grey and Bruce division of the Grand Trunk railway.

The population is about 1,600, and the exports are lumber, tan bark and bricks, while salt, cord-wood and general merchandise are imported. The maximum draught for vessels entering this port is 14 feet at low water stage.

Work commenced on repairs to the breakwater by day labour on the 15th August and was completed by the 14th December, 1914.

The work consisted of repairing the outside of western breakwater from the shore eastward for a length of 208 feet, by means of concrete blocks stepped up to a height of 6 feet, and backed with stone, also slight repairs to a landing wharf for small boats, consisting of new waling and levelling up decking with gravel after removing the old decayed planking and sleepers.

The total expenditure for the fiscal year 1914-15, was $1,519.66.

PORT HOPE.

Port Hope, in the County of Durham, is situated on the shore of Lake Ontario, 63 miles east of Toronto. The Grand Trunk, Canadian Pacific and Canadian Northern railways all pass through this place.

The chief trade was in lumber and grain, but now there are several important industries among which are the Preserving and Canning plant, factories for enamel-

ware, iron sewer pipes, plumbers' supplies and tanneries, foundry, flour mills, carriage factory and several other manufacturing concerns. Port Hope has a population of 5,000.

On the 7th July, 1914, a contract was awarded to Messrs. Tompkins & Cunningham for an approximate sum of $42,763.63, unit rates.

Work was commenced on the 10th July and is still in progress.

The work proposed consists of the construction of a revetment wall 645 feet long by 16 feet wide of cribwork for submerged construction with a concrete superstructure consisting of a face wall 3 feet wide on top, 5 feet at bottom and 7 feet high.

The work to date comprises the manufacture of concrete blocks, the assembling of plant and material in readiness for work in the spring; the excavation of the crib seats for about 200 feet at the southerly end and the removal of a quantity of material that was overlying the rock.

*Repairs.*

On 12th June, 1914, authority was given to expend the sum of $3,000 on wharf repairs by day labour.

Work commenced 13th July and was completed by the 30th November, 1914.

This work consisted in repairing the revetment wall on the west side of the property of the Standard Ideal Company for a length of 166 feet from the southerly end over an area of 16 by 40 feet, the replacing of 210 planks on the remaining portions where required for a length of 1,330 feet, also repairing part of the decking on the north revetment wall of the westerly basin 15 by 16 feet, and placing new decking on the east pier near the fog signal station 15 by 16 feet; reconstruction of the southerly end of the westerly channel pier commencing on the south end and extending for a distance 71 by 16 feet and placing waling thereon, also placing 116 cubic yards of stone between the lighthouse and south end of the east pier with new decking and general repairs to other portions of the structure.

Total expenditure for the fiscal year 1914-15, was $10,639.36.

*Dredging.*

A contract was awarded to the Canadian Dredging Company on November 9, 1914, at the rate of 24 cents per cubic yard, place measurement, class "B" material, for removing an estimated quantity of 17,580 cubic yards from the entrance to the piers. Work had not commenced before the close of the year, as the time does not expire until September 1, 1915.

PORT PERRY.

Port Perry, in the County of Ontario, on the west shore of Lake Scugog, is on the Midland division of the Grand Trunk railway, 16 miles north of Whitby and 25 miles south of Lindsay, and has a population of 1,500. Lumbering is the principal industry and it is the centre of a rich farming district, consequently ships a large amount of live stock and other farm produce. It is also on the chain of lakes in connection with the Trent Valley canal system.

Authority was given to commence the construction of a wharf with waiting room by day labour.

Work commenced on September 1 and was continued until the weather prohibited activities.

The work comprised the construction of an approach 60 feet long built of pile work topped with concrete blocks, for the commencement of the superstructure, also two cribs 60 feet long each and 20 feet wide the whole being filled with stone, and the placing of concrete blocks on these cribs for 70 feet in length, for foundation of superstructure.

Total expenditure for fiscal year 1914-15, was $3,999.01.

PORT ROWAN.

Port Rowan, in the County of Norfolk, is situated on the north shore of Lake Erie, in the inner bay of Long point, and is 21 miles from the town of Simcoe. Population about 1,000. It is a port of entry and a favourite summer resort. A considerable amount of fish is shipped over the dock. It is a terminus of a branch of the Grand Trunk railway. A large number of launches and light draught tugs utilize this pier, particularly during the summer months, and it is a harbour of refuge for such craft.

The value of the fishing catch for the past season amounted to approximately $25,000.

Authority was received to make repairs to piers by day labour, and work was commenced on October 5, closed down on March 20, and consisted of repairs to rip-rap along approach to pier, and placing on approach, about 150 cubic yards of broken stone.

In the execution of the above work, approximately 634 feet, b.m., of timber, 100 lbs. of iron and 150 yards of broken stone were used.

The expenditure for the fiscal year 1914-15 is $400.

PORT STANLEY.

Port Stanley is an important harbour of refuge on the north shore of Lake Erie, at the mouth of Kettle creek, in the County of Elgin, 8½ miles by rail south of the city of St. Thomas and 23½ miles south of the city of London. It is one of the terminii of the London and Port Stanley branch of the Père Marquette railway and of the London and Lake Erie Railway and Transportation Company. Population, about 1,000, which is largely increased during the summer months, it being a favourite summer resort.

The Lake Erie Coal Company of Walkerville operate a large coal ferry carrying 30 cars, each of a capacity of 100,000 pounds, between this port and Conneaut, Ohio. This ferry makes an average of two round trips every 30 hours. During the season of 1914, the ferry made 381 trips, and brought 456,124 tons of coal and other freight into this port.

It is a port of entry and the revenue collected during the current fiscal year amounted to $130,418.79; it is also a most important fishing point, some 20 tugs being employed in this business and during the past season, over 3,600,000 pounds of fish were handled over the piers, amounting in value to nearly $200,000.

It is a regular port of call for three lines of steamers carrying passengers and a considerable amount of package freight. The small grain elevator at this place handled 305,000 bushels of wheat during the past year. The maximum draught of vessels entering this port is about 18 feet.

During the season of 1913-14, 662 vessels entered this port having a total registered tonnage of 776,503 tons. In addition to the imports already mentioned, timber, ties, fence posts and general merchandise are shipped over the piers.

At the last session of Parliament, the sum of $105,000 was voted for harbour improvements. Authority was received to proceed with the works, which consisted of the following:

*West Pier.*

Two hundred and forty-five feet of this pier, on a site adjacent to proposed warehouse, was entirely reconstructed with close-faced sheet piling tied back securely to anchor piles in rear of structure and with stone filling between. The superstructure of this section of pier was also completed and consisted of front and rear reinforced concrete face walls respectively 18 and 15 inches thick, tied together with reinforced

concrete crossties and decked with 6-inch reinforced concrete flooring, the whole of the space between walls, crossties and decking being filled with stone and gravel.

An additional section of this pier near the ferry slip, for a length of 80 feet, of which the substructure had been built in the previous year, was completed with the exception of 40 feet of decking, and an additional section south of this part of pier, for a length of 75 feet, was completely reconstructed, except for the decking. Another section for the length of 40 feet had the old timber pier and filling above L.W.L. removed.

Near the inner end of west pier, a washout in rear of this pier occurred during the past season, which necessitated the construction of a close-faced pile wall 63 feet in length, which was securely anchored by means of tie rods to anchor piles, which were driven in rear of same at 10-foot centres.

*East Pier.*

One cluster of six 40-foot oak piles and six separate 40-foot fender piles at 50-foot centres were driven alongside of and on the harbour side of the outer 500 feet of the east pier, as it was found that it would be impossible with the amount available to proceed further with the removal of this section of the east pier.

Work in connection with the repairs to the east and west pier was commenced on April 18, 1914, and was closed down on January 20, 1915.

*Groynes.*

The repairs to groynes consisted of the refilling of same with heavy rubble, and was performed between March 3 and March 26. One groyne only was repaired on account of inclement weather.

*S.W. Breakwater.*

A contract for this work was awarded to Mr. M. J. Hogan, of Port Colborne, on December 30, 1911, for the sum of $210,376. On August 2, 1913, advice was received of the approval of a change substituting concrete footing blocks at L.W.L. for mass concrete, covered with iron plates, in the superstructure of this work, on the understanding that a reduction of $10,000 would be made to cover this change.

On the closing down of this work under this contract, on September 27, 1913, the entire substructure had been completed, and 880 lineal feet of footing blocks for superstructure were stored on shore for use during the present season.

Work during the present season extended from April 24 to October 6, 1914, when all work in connection with this contract was found to be completely finished.

*Warehouse.*

In accordance with instructions, plans and a specification for the construction of warehouse, adjacent to the west pier, were prepared and forwarded on June 4 last. An Order in Council was passed on February 3 authorizing the acceptance of tender of Mr. A. E. Ponsford, of St. Thomas, Ont., for the construction of said warehouse at the unit price quoted in said tender, entailing an approximate expenditure of $10,741.

Further instructions were received on the 13th February, authorizing a change in location of warehouse to a point farther south along west pier, at the request of the Hydro-Electric Commission of Ontario, who are electrifying the London and Port Stanley Railway, in order to enable them to provide a proper lay-out of trackage adjacent to warehouse, provided the cost of such change would not exceed $835.

Operations in this connection were commenced on the 11th March, and were still in progress on the 13th.

*Dredging.*

During the past season, a total of 20,015 cubic yards, of silt, clay and quick sand was removed by dredging from the channel at outer entrance to harbour and between the entrance piers.

The work was performed by the government dredge *Sir Richard No. 120,* working between September 12th and November 21st, under authority dated September 2nd, 1914.

The objects of this work were—

(1) To remove the shoal which annually forms at outer entrance to harbour.

(2) To widen and deepen the channel between piers.

The dimensions of the completed work were as follows:—Outer entrance channel for a length of about 450 feet minimum depth obtained, 18 feet below L.W.L. for width of 50 feet to the east of range line, and a minimum depth of 19 feet below L.W.L. for a further width of 40 feet. Between piers, for a length of about 1,200 feet, minimum depth 19·5.

The comparison of quantities removed, that is scow measurement, calculated quantities, place measurement, is as follows,—

| | | |
|---|---|---|
| Total scow measurement, quantity . . . . . | 20,015 | cubic yards. |
| place " " . . . . . | 17,935 | " |

Average resulting expansion factor, 11·6%

The probable duration of the improvements made in connection with the dredging performed is not likely to extend far into the present year and in order to afford the required depth of water for vessels drawing 18 feet, further improvements are required during the coming season.

PORT SYDNEY.

Port Sydney, township of Stephenson, District of Muskoka, is an incorporated village; population, 300.

Industries consist of one saw-mill and one grist-mill. Exports consist of 500,000 feet b.m. lumber per annum and 3 carloads of flour, while imports consist of household goods.

The village is a tourist distributing point, has accommodation for 1,000 summer tourists. Last year alone some 4,000 tourists were located on Mary lake.

The Huntsville and Lake of Bays Navigation Company give a double service daily from Huntsville to Port Sydney, and the steamer *Jem,* owned by Sydney Smith, runs extra trips. In addition to the passenger boats, there are a large number of gasoline launches in service.

Authority was given to construct a pile wharf, 72 feet long by 18 wide, with a stone approach to same 111 feet long by 12 feet wide on top and an "L" 56 feet long by 18 feet wide.

Work was begun by day labour September 24, 1914, and completed December 3, 1914. The materials used in the construction of this wharf consisted of 20,089 feet b.m. lumber and 1,773 lbs. of iron.

Expenditure for fiscal year 1914-15, is $1,828.17.

*Warehouse.*

Authority was given to expend the sum of $350 in the construction of a warehouse and shelter, 24 by 16 feet, on the new wharf.

The work was begun by day labour December 26, 1914, and completed January 31, 1915. The materials used in the construction of the warehouse consisted of 70 feet eave trough, 20 feet conductor pipe, 6,000 shingles, 2,800 feet b.m. lumber, and 90 lbs. of iron.

Expenditure for fiscal year 1914-15, is $347.69.

PROVIDENCE BAY.

Providence Bay is situated on the south shore of Manitoulin island, Lake Huron, about 25 miles southeasterly from Gore bay and has the only harbour along the coast. The population numbers about 300, engaged in agriculture and fishing, each of which is fairly important and two or three fishing tugs make headquarters here. Passenger steamboats call regularly to and from Owen Sound and intermediate ports.

Instructions were given on June 12, 1914, to construct a warehouse on the wharf, by day labour.

Work was commenced on July 20, and was completed on September 30, 1914, and consisted of the construction of a standard warehouse 24 feet wide by 48 feet long and replanking with 2-inch hemlock lumber a portion of the wharf 243 feet long with an average width of 10 feet, also some stone filling in the 30-foot stone approach and in front of the warehouse. The riprap in front of the warehouse was placed to keep boats from running into the building. In the performance of these works some hardware consisting of one stove and pipe, hinges, locks, glass, etc., 4,500 feet of 2-inch hemlock lumber, 13,389 feet of 1-inch sheeting hemlock, 2,639 feet of 1-inch oak lumber, 3,500 of 1-inch pine, 4,036 square feet pine timber, 16¾ M shingles, 1,073 lbs. nails, 46 gallons of paint and oil and 375 bricks were used with a total expenditure of $1,905.93.

PUCE.

Puce is a village situated on the south shore of Lake St. Clair on the London and Windsor line of the Grand Trunk railway, is 13 miles east of Windsor and 32 miles west of Chatham. Population about 100.

On January 28, authority was received to repair the damage caused by an ice-jam which occurred during the past winter in Lake St. Clair, to the sheet piling at the mouth of the Puce river.

Work was performed between February 18 and 25, 1915, and consisted of the removal and salvaging of the sheet piling on both sides of the harbour for a total length of about 130 feet.

In addition, 800 feet b.m. timber was purchased for waling required when the reconstruction of the pile wall is proceeded with.

Expenditure for fiscal year, 1914-15, is $79.90.

PUMPKIN POINT.

Pumpkin Point is a point of land forming part of the southerly shore of Lake George in the St. Mary's river, in the township of Laird, and is about 20 miles easterly from the city of Sault Ste. Marie. It is part of a very prosperous farming country and large quantities of hay, grain, vegetables and livestock are exported annually. The population nearby numbers about 500.

Authority was given on June 12, 1914, to construct, by day labour, a public wharf and warehouse.

Work was commenced on August 13, and was completed on November 16, 1914, and consisted of the construction of a cribwork wharf 80 feet long by 16 feet wide, by 3 feet above the water level and with a total height from the bottom of 12 feet, connected with the shore by a stone fill approach 120 feet long by 16 feet wide, and a standard warehouse 18 feet wide by 40 feet long, which has an independent cribwork and stone fill foundation.

In the performance of this work, some 26,292 feet b.m. of B.C. fir, 5,124 lineal feet of 14-inch diameter round hemlock logs, 3,095 pounds of iron and nails, 1,200 cubic yards of stone, 13,620 feet b.m. of lumber in the warehouse, 13 M shingles, 24 gallons of paint and oil, 70 bags of cement and 1,332 feet b.m. oak plank; also the necessary hardware fittings for the warehouse were used, amounting to $4,243.83.

RAINY RIVER.

*Pile Protection Work at Oak Point.*

The Rainy river flows in a westerly direction from Rainy lake into the Lake of the Woods. It forms the international boundary between the province of Ontario, Canada, and the state of Minnesota, U.S.A.

There is considerable traffic on this river, consisting of the two passenger steamers of the Rainy River Navigation Company, the tugs and rafts of lumber companies and numerous small craft.

To improve navigation at the mouth of the river, a channel has been dredged across certain shoal areas. To protect this channel from the encroachments of sand bars, a protection work was considered necessary. The only available place for such a work was at Oak Point, a long narrow neck of sand running out on the United States side.

As the exact location of the international boundary at the mouth of the Rainy river is still in process of delimitation, under the Treaty of 1908, and as it was considered probable that the whole of Oak Point might be in United States territory, approval of the improvement work was obtained from the United States government at Washington, and permission to conduct such operations as might be necessary for the accomplishment of the work.

A contract, dated June 16, 1914, was then let to Messrs. Sims and Bingham, of Ottawa. This contract called for a structure 800 feet long formed of square timber, 6-inch sheet piling (B.C. fir) 26 feet long with round timber guide and anchor piles approximately 30 feet long, all securely braced.

On account of the exposed position and strong winds at Oak Point, it was decided to do this work on the ice during the winter.

Plant and materials were assembled and camps formed during the late summer and autumn and the actual work was started December 26, 1914, as the ice was, by then, sufficiently strong. The work was carried on steadily and was completed February 25, 1915. Ten thousand and twelve lineal feet of round guide and anchor piling and 119,256 feet b.m. of sheet piling were driven in place and 23,776 feet b.m. square timber was used as bracing. The whole structure is strong and substantial.

Expenditure for the fiscal year 1914-15 is $11,366.29.

*Dredging.*

For several years past, shifting sand bars and shoals at the mouth of the Rainy river had rendered necessary, in the interests of navigation, certain improvements in the shape of dredging. Previous to 1913, these had been carried out in what is known as the "Towing Channel" behind Sable island.

Early in 1913, examinations and surveys were made and it was decided to abandon the "Towing Channel" and improve what is known as "The Old Steamboat Channel" at the main mouth of the river which leads direct, between Oak point and Sable island, to the open lake.

A contract was let for this dredging in 1913 to J. T. Horne, Esq., of Fort William, which provided for dredging a channel through two sand bars or shoals in the "Old Steamboat Channel." The area to be dredged was 1,600 feet long, 200 wide and 14 feet deep. This was partially done during 1913.

The work was resumed for 1914 on May 20, and in June the contract was extended to cover the middle ground between the two barns previously mentioned, making an additional length of 1,200 feet or a total length of 2,800 feet.

All the material was sand and clay, class B., with an average face of seven feet. The haul was approximately 1½ miles. The work was done on a place measurement basis which proved entirely satisfatcory.

Work was shut down on August 8, 1914, but by this time, a continuous channel 2,800 feet long, 14 deep and approximately 200 feet wide had been dredged. Quantity removed, 1914, 80,881 cubic yards, place measurement.

A pile protection work was constructed to protect this channel and the results obtained justify the decision to improve the "Old Steamboat Channel" instead of the "Towing Channel" as had been attempted previously.

Expenditure for the fiscal year 1914-15 is $39,524.45.

### RICHARD'S LANDING.

Richard's Landing is a village of about 400 inhabitants, situated on the northwest side of St. Joseph's island in the St. Mary's river, on the steamboat route from Sault Ste. Marie to Blind River, Little Current, etc., and about 35 miles easterly from the former. All steamboats plying on this route call regularly and there are also daily steamboats to Sault Ste. Marie. The traffic consists chiefly of ordinary merchandise.

Instructions were given on May 8, to construct by contract work, an extension to the wharf. A contract was entered into on January 14, 1914, with Messrs. John O'Boyle & Company, for the performance of this work at schedule prices, according to which the estimated cost would be $21,746.03.

Work was commenced on May 1, and was completed on December 12, 1914, and consisted of the construction of a line of cribwork with concrete superstructure 180 feet long by 18 feet wide by a height of about 21 feet in front of the old structure, which was then completely torn out over an area 146 feet long by 63 feet wide, and replaced with rock filling, having a fine crushed rock surface.

The total estimate given to the contractor was $24,396.03, which is $2,650 more than the contract price, owing to the fact that the old cribwork was considered to be filled with stones and when being demolished, it was found the ballast floors in them were placed not more than one foot below the water level and contained only a depth of 1 or 2 feet of stone. The total amount of stone filling amounted to 6,192 cubic yards which is an increase of 2,120 cubic yards at $1.25 or $2,650, and inspection amounted to $651, making a total expenditure of $26,047. The concrete superstructure of the whole wharf was nearing completion when, on the night of August 3, 1914, crib No. 1 (the most easterly one), subsided along its outer face sufficiently to cause the top of the work to move out of alignment about 4 feet. This necessitated breaking up the concrete, taking out the stone ballast, removing the crib, removing a portion of the back filling, repreparing the foundation and then the replacing of the crib, refilling it, reconstructing the superstructure, etc.

### RIVER THAMES.

The River Thames flows through the city of Chatham, 18½ miles west of the latter place, it empties into Lake St. Clair. At its mouth, a channel 8,100 feet in length has to be maintained in order to reach deep water in the lake. Owing to the shifting character of the bottom of the channel, the material being sand, continual filling-in occurs, in consequence, the clean-out of the channel has to be performed almost annually, in order to provide a minimum depth of 12 feet. A steady traffic prevails in and out of this river throughout the season, from the city of Chatham and the smaller points lying between the city and the mouth of the river. The Chatham Navigation Company operates a passenger and freight boat between the cities of Chatham, Windsor and Detroit, making three trips per week. During the fiscal year 1913-14, 175 vessels arrived at the port of Chatham, having a registered tounage of 41,108 tons,

and the revenue collected during the said year, amounted to $166,482.71. The maximum draught as far as Chatham is now about 12 feet.

Authority was received to remove obstructions between the city of Chatham and the river mouth, and to build protection work at Chatham by day labour.

*Removal of Obstructions.*

Operations were commenced on May 16, and were actively carried on until October 23, when the three logging outfits employed on this work were docked. Since the latter date, a small amount of work has been done in attending to plant and preparing it for the next season.

The operations extended principally over a section of the river 2¼ miles long to the south of Prairie Siding, and the work performed consisted principally in the removal of 1,880 pieces of snags, 8,696 feet b.m. of saleable sawlogs, and two long oak timbers suitable for piling.

*Protection Work.*

This work consisted of the construction of close-faced sheet-piling wall at a bad bend in the river, fronting the property occupied by the public general hospital, piling being 8 inches thick, 16 to 18 feet long, with two front wales 6 by 8 in size, and the whole of the sheeting being secured in place by means of 1-inch tie rods at 10-foot centres, extending from the pile wall to white oak anchor piles 12 feet long driven in rear of sheeting.

An agreement was made for the construction of this work on July 7 with Mr. John M. Gibb, of Wallaceburg, Ont., and 350 lineal feet in all of completed sheet piling were constructed. In addition six extra anchor piles had been driven beyond length stated and iron bolts and tie rods are on hand for the completion of this section of the work next season. The operations extended from August 7 to November 7 inclusive.

*Ice-breaking.*

Under authority of December 9, an agreement was made with Captain J. S. McQueen, of Amherstburg, Ont., to lay up his tug *LeRoy Brooks* at the mouth of the Thames for the sum of $500, and to perform the required work of ice-breaking at the rate of $7 per hour.

Operations commenced on February 15, when it seemed likely that the annual break-up would occur, and heavy ice jams would form, and were closed down on February 23 on account of the tug losing her rudder. During this time, a channel from 30 to 50 feet wide and approximately 8 miles in length had been obtained, and no ice jams had been encountered. Dynamite was used with satisfactory results over a considerable distance, holes being blasted in the ice, which was about 18 inches thick, at 15-foot centres.

Owing to the exceptionally favourable weather that has obtained during the winter break-up, it is doubtful whether any ice jams would have formed to such an extent as would cause flooding and damages to the farm lands adjacent to the river, but practically all work contemplated had been attended to at the time the tug broke down.

*Plank Walk.*

A plank walk 4 feet wide and 70 feet long was constructed on a substructure of white oak piles over a drainage ditch near the lighthouse. The pile driving was done by Mr. J. E. Doyle, of Chatham, and operations extended from the 15th instant to March 31, 1915.

The total expenditure for the fiscal year 1914-15, is $7,999.60.

ROCKLAND.

Rockland, in Russell county, is situated on the south shore of the Ottawa river, 22 miles below Ottawa. Population, 2,900.

The departmental dredge *No. 113* worked at the W. C. Edwards Company wharfs at Rockland (September 17-October 20) removing large deposits of sawdust and slabs from in front of the wharfs, which greatly hampered the landing of boats and loading barges at this point.

At the wharfs in front of mill No. 1, an area of some 31,200 superficial feet was dredged over to a grade depth of 13 feet, and at mill No. 2 an area of 14,740 feet was dredged to the same grade.

Ten thousand nine hundred and twenty-five yards, scow measure, sawdust and slabs were removed. This quantity does not represent the whole excavation, as, when this material was stirred up by the dredge, a large portion floated away with the current.

RONDEAU.

Rondeau is an important harbour of refuge, and a port of entry, situated on Pointe aux Pines, about 19 miles south of the city of Chatham, and 45 miles west of Port Stanley. It is a favourite summer resort, and is a terminus of the Sarnia and Rondeau branch of the Père Marquette railway. Population, about 125, which is increased to about 600 in the summer months.

In the inner harbour and at westerly side along coal dock, a modern and extensive coal handling plant is used by the Lake Erie Coal Company for unloading coal from their boat, which runs regularly between this point and Conneaut, Ohio.

During the season of 1914, 289,587 tons of coal were brought in to this port, the car ferry making 145 round trips during that time. Customs duties collected for year 1913-14, amounted to $78,602.19, and during the same period 192 vessels having a registered tonnage of 160,315 tons arrived. A small fishing trade is carried on at this port, and the maximum draught for vessels entering the harbour is 18 feet.

On June 12, authority was received to make repairs to piers by day labour, and operations were commenced on May 2 and closed down on December 17, 1914.

The work performed is as follows:—

Repairs and renewals to a section of the west pier, 288 feet in length, including principally four tiers of face timbers on harbour face; one-third renewal of cross ties; general renewal of stringers and a large proportion of new decking. In addition, two new snubbing posts were placed and general repairs to decking were made over remainder of pier.

General repairs were made to decking of east pier, and on the breakwater, the handrail in rear of banquette wall was repaired for a length of 600 feet by the renewal of tees and nipples in wall and placing 600 feet of ½-inch wire cable through same, instead of renewing the pipe handrail which has only been in place about three years but which was badly torn and damaged by the action of ice in winter. A considerable amount of riprap was placed in repairing talus.

In the execution of the above works, approximately 19,400 feet b.m. timber, 1,000 pounds iron, 175 cords of stone riprap, and 50 cubic yards concrete were placed.

The expenditure for the fiscal year, 1914-15, is $2,884.96.

ROSSEAU.

Rosseau, township of Humphrey, District of Muskoka, is a popular summer resort, situated at the northerly end of Lake Rosseau. It is largely patronized by tourists.

Authority was given to extend the present wharf by an addition of 20 feet in length and 18 in width; the work to be done by day labour, and consist of wooden substructure and concrete superstructure.

Work was begun September 19, 1913, and continued up to November 15, 1913, when all operations ceased owing to winter season having set in. The total expenditure up to that date was $1,502.54.

Authority was given to expend the sum of $280 to complete the work, which was resumed June 1, 1914, completed June 30, 1914.

Expenditure for fiscal year, 1914-15, is $279.50.

### ST. JOHN CREEK.

St. John creek in Ontario county, flows through the township of Rama, rising in St. John's lake and emptying into the Black river.

On June 12, 1914, authority was given to expend $2,500 by day labour in the construction of a stop-log dam, and on November 17, 1914, a further expenditure of $1,000 was authorized.

The dam was constructed for the conservation and regulation of the water for lumbering and agricultural purposes.

Work commenced on August 6, 1914, and consisted in the construction of a stop-log dam having two sluiceways of 14 feet each; the centre pier is 4 feet wide, and the abutments are 3 feet thick with wing walls 2 feet, making a length over all of 42 feet and a width on top of 24 feet and at the bottom 26 feet.

The total expenditure for the fiscal year, 1914-15, was $3,507.64.

### ST. JOSEPH.

St. Joseph in the County of Huron, township of Hay, is situated on the shore of Lake Huron about 12 miles from Hensall, the nearest railway station on the London, Huron and Bruce branch of the Grand Trunk railway, 22 miles south of Goderich. It has a population of about 50.

On August 27, 1914, authority was given to make repairs to the wharf by day labour.

Work was commenced September 2 and was completed October 21, 1914, and consisted of placing a face timber on the outer end, removing and replacing some decking and filling several pockets of the cribwork with stone.

Total expenditure for the fiscal year, 1914-15, was $128.23.

### SAND POINT.

Sand Point is a station on the main line of the Canadian Pacific railway in the County of Renfrew, on Chats lake. Between it and Norway bay, a growing summer resort, there is a regular boat service.

The wharf as originally constructed consisted of an earth approach 147 feet long, earth fill approach 18 feet by 85 feet and landing-head 50 feet by 68 feet between concrete walls which rested on a cribwork foundation. Unexpected settling of the foundation caused breaks in the concrete wall and irregularities in its elevation and face lines; owing to this, it was considered expedient to build new concrete face walls outside the landing-head, resting in close centered piles and connect up the old and new work on top by means of a reinforced slab. There was also a considerable amount of earth fill required to grade up the approach and landing-head.

The improvements which were started in February last and discontinued on March 31, were proceeded with and completed June 27 to August 20, 1914.

The new concrete face walls (on piling), 8 feet high, 196 feet long (3 sides of landing-head), 1½ feet wide on top and 3¼ feet at bottom, which were built 2½ feet high to the end of March, were completed to the required height of 8 feet at elevation

248·1. A reinforced 6-inch slab was placed, extending from new to old walls. The slips were raised, the earth fill in landing-head and approach was graded to 248·1 and the pipe hand-railing and shed were painted.

Expenditure to March 31, $886.30.

SARNIA.

Sarnia is a thriving city, situated on the east bank of the St. Clair river, in the County of Lambton, about 3 miles south of Lake Huron and 59 miles by rail, from the city of London. It is served by both the Pere Marquette and Grand Trunk railways. Population about 11,500. It is a port of call for a large number of vessels and is the headquarters of the Northern Navigation Co. During the fiscal year 1913-14, 2,014 vessels arrived at this port having a total registered tonnage of 1,212,856. During the same period, the customs duties amounted to $531,337.63.

Many large industries are located at this point, among others being, the Imperial Oil Company, which has a large plant in operation and which is being steadily increased in size. The maximum draught for vessels entering this port is 21 feet.

*Dredging.*

During the past season, a total of 31,236 cubic yards of clay, sand and silt, was removed by dredging.

Of this quantity, 4,384 yards scow measurement of clay, were dredged in removing the shoal fronting the Imperial Oil Company's dock and the remainder, that is 26,852 yards sand, silt and clay, was dredged in removing part of shoal opposite and adjacent to Reid's dock, Sarnia basin.

The work was performed by the Government dredge *Ontario, No. 114,* working between September 8 and 14 for the former area and September 22 and November 25, for the latter area.

Authority for this work was received under dates of July 16 and September 18, 1914.

The objects of the above work were:—

(1) To provide a safe depth of 20 feet for navigation of deep draught vessels adjacent to Imperial Oil Co's. dock.

(2) To provide a turning and mooring basin in the second location above referred to, in order to enable the wintering of the boats belonging to the Northern Navigation Company as well as of other boats at this port.

The dimensions of the completed work were as follows:—

(1) For length of approximately 350 feet and a width of 60 feet, a minimum depth of 19·9 feet was obtained.

(2) For length of about 550 feet, width 300 feet, fronting a portion of harbour to the north of water-works intake at the foot of George street, a minimum depth of 19·8 feet below L.W.L. was obtained, with the exception of one point in the N.W. corner of the area, where a depth of 19·1 foot was found.

It had been intended to remove the south end of this shoal, that is from the water-works intake south a short distance but this was found impossible as the new intake at Point Edward had not been completed at the time this dredging was performed and thus prevented the removal of the old intake.

The comparison of quantities removed is as follows:—

*Location* 1, adjacent to Imperial Oil Co's dock

| | | |
|---|---|---|
| Total scow measurement, quantity | 4,384 | yards |
| place " " | 3,054 | " , and the |
| resulting expansion factor | 43·5% | |

*Location* 2, in Sarnia Basin, north of George street.

| | | |
|---|---|---|
| Total scow measurement, quantity | 26,852 | yards |
| " place " " | 21,469 | " |
| Resulting expansion factor | 25·07% | |

The improvements made in performing the dredging in the location adjacent to the Imperial Oil Company's dock should be effective in providing a sufficient depth of water for some time to come.

The work performed in the shelter basin has been effective in providing a location for several vessels to winter in and will likely prove effective until the proposed harbour improvements at this port, which include dredging over the area already improved, are undertaken.

SAUGEEN RIVER.

Saugeen River, one of the harbours of Southampton, is in the County of Bruce at the mouth of the Saugeen river which flows into Lake Huron.

Walkerton, the county seat, is about 32 miles up the river, and Kincardine about 31 miles southward down the lake shore.

This harbour is principally used by fishing craft, the industry being extensive, averaging in value from $35,000 to $40,000 per year. The other harbour known as "Chantry Island" is about a mile down the shore and is utilized for other commercial enterprises as well as a harbour of refuge for moderate draft vessels.

The population of the town is about 1,800, which is greatly augmented during the summer months by the numerous visitors who have pretty cottages along the beach between the two harbours. It is the terminus of a Grand Trunk branch line.

On April 25, authority was given to make temporary repairs to the landing dock in front of the fish houses, where a large hole had been made by the spring freshet, the face piling having also given away on account of decay. The hole was merely planked over with planks resting on long square timbers, between the 1st and 5th May. The outlay was $43.68.

On May 5, 1914, authority was given to expand $5,000 on more permanent repairs to the same landing dock by day labour.

This work commenced on June 3, and consisted of sheet-piling the face of the landing dock in front of the fish houses, independently of the old original face and varying from one to five feet out therefrom in order to straighten this dock. The piling is of 10 inch thickness with main piles and anchor rods; also reparing both the north and south entrance piers.

The work performed was as follows:—

*To the north pier.*—There were 150 feet of face timber including the renewal on the south side, 70 feet on the north side and 6 cords of stone filling.

*To the south pier.*—There were 123 feet of decking and stringers renewed on the outer end and 6½ cords of stone filling on heavy brush.

*To landing wharf.*—In front of fish houses there were 222 feet of stone filling with two rows of 8 by 8 inch waling in front and one row behind; 77 cords of stone backing over heavy brush and 142 yards of gravel top dressing.

Total expenditure for the fiscal year 1914-15, was $4,936.56.

SAULT STE. MARIE.

This city including the contiguous city of Steelton has a population of about 20,000 and is increasing steadily in population and importance as the industrial and commercial centre of north-western Ontario. It was founded by Father Jogues 300

years ago when a mission to the Indians was established on the river, at the foot of the falls which he christened Sault Ste. Marie, and from which the river became known as the St. Mary's river. It was subsequently a mere trading post until comparatively recent years, but since the lake traffic began to grow in importance and demanded the improvement of the channels connecting the great lakes, and with the advent of canals and locks to permit cargo vessels to trade from Lake Superior ports to Lake Erie ports, the lake trade has grown into gigantic proportions until at the present time the amount of freight passing through the river is, according to the official canal office records, about 100,000,000 tons per annum. The trade of the town itself is large and in 1912, according to the report on Trade and Navigation, the value of goods entered through the Customs was—imports $7,726,940 and exports $7,373,465. The Lake Superior Corporation's steel mills turn out about 1,500 tons of railway rails per day and its pulp and paper-mill manufactures some 600 tons of newspaper per day.

(A)

Instructions were given on May 8, 1914, to carry on the contract work of the building of a revetment wall extension about 243 feet long to the public wharf at $111 per foot, or a total of $26,973; this work to be considered as an extension of the John O'Boyle contract for the construction of an approach to the wharf.

Work was commenced on July 11, and was completed on October 26, 1914, and consisted of the construction, in about 18 feet of water, of a line of cribwork 243 feet long by 18 feet wide with a concrete superstructure, and the filling in with rock of an area behind it 243 feet long by 41 feet wide. In the performance of it some 10,000 cubic yards of rock filling, 149,820 feet b.m. of hemlock timber, 34,000 lbs. of iron, 5,520 lineal feet of ballast poles, 2,500 cubic yards of concrete and 3,629 feet b.m. of B.C. fir were used, amounting to an expenditure of $27,341.

(B).

Instructions were given on May 8, 1914, to widen the stone approach to the wharf.

Work was commenced on August 13, and was completed on November 16, 1914, and consisted of an extension to the stonefill roadway approach making it 51 feet wide at its shore end and 75 feet where it joins the wharf by 218 feet in length, whereas its former dimensions were 22 feet wide by 218 feet in length, and it includes the construction of a reinforced concrete culvert, having an opening 16 feet wide, also a concrete sidewalk 4 feet wide by 9 inches deep on the east side of the approach, and in the performance of this work some 10,000 f.b.m. of hemlock and pine timber, 6,401 pounds iron and nails, 88¼ barrels of cement and 110¼ cubic yards of sand and gravel were used, with a total expenditure of $4,516.67.

*Dredging.*

An extensive scheme of improvements to the harbour was commenced in the year 1912 and is still in progress. Two contracts were entered into by the Department with the Soo Dredging & Construction Co., Ltd., of Sault Ste. Marie Ont., for the performance of dredging as follows:—

(A) The dredging of a portion of the main ship channel of the St. Mary's river approaching the Canadian lock. The contract under which this work is being performed is No. 8960, dated July 31, 1912, which provides for the removal of rock at the unit price of $3.47 per cubic yard, and the removal of all other material at the unit price of 92 cents per cubic yard, on a place measurement basis of payment.

(B) Under contract No 8960, the excavation of a slip between the Algoma Central Railway Company's coal wharf, and the new Ontario Dock and Coal Com-

pany's wharf, as described hereunder at the unit prices of $3.47 per cubic yard, place measurement, for the rock and 50 cents per cubic yard, place measurement, for all other material.

(C) Under contract No. 9065, dated October 14, 1912, at the unit prices of $3.47 per cubic yard for rock, place measurement, and 92 cents per cubic yard, for all other materials, and the excavation of a slip on the easterly side of the New Ontario Dock and Coal Company's wharf, and the excavation of a slip on the easterly side of the International Transit Company's ferry wharf.

The expenditure during 1912, on these two contracts amounted to $163,137.19. (See annual report of Minister of Public Works for the fiscal year, ended March 31, 1913, page 243.)

*(A.) Main Channel.*

The object of this work was to remove that part of the shoal extending into the river from the Canadian side, which lies beyond the line joining the outer ends of the Government, Ferry and New Ontario and Coal Company's wharfs, thus widening the channel approaching the Canadian lock, and greatly improving it thereby, and at the same time providing improved approaches to these wharfs. Its length is about 4,000 feet extending from the New Ontario Dock to east of the Government wharf, but the width is variable on account of the irregular contour of the shoal and would average about 200 feet. The grade depth being made is 21·5 feet below the datum level of 582·37 feet above mean sea level, which is the standard improvement plane adopted in connection with public works by both United States and Canadian governments for the river opposite Sault Ste. Marie.

Work was commenced on July 2, 1912, and suspended for the season on December 2, during which time 33,788 cubic yards, place measurement, of red sandstone rock and 8,698 cubic yards place measurement, of stones, boulders and mud, were removed, representing an expenditure at contract prices of $125,246.52.

Work was continued on June 1, 1913, until the close of the season in December. During this period, 5,046 cubic yards of rock, and 37,174 cubic yards of stones and mud were removed, for which estimates were returned in favour of the contractors amounting to $133,666.10.

Work for the season was begun on May 1, and it closed on December 3, 1914. During this period, 12,264 cubic yards of rock, and 2,763 cubic yards of loose stones and mud were removed, for which estimates were returned in favour of the contractors amounting to $45,098.04.

The total quantities removed to date from the main channel is 83,226 cubic yards of solid rock and 16,507 cubic yards of other materials, place measurement, respectively.

The work remaining to be done consists principally of "sweeping," or cleaning up the bottom.

*(B) A. C. R. Slip.*

The object of this work was to dredge a slip between the coal wharf built by the Algoma Central Railway Company and the New Ontario dock, to enable large vessels to unload at either of these wharfs. The area to be covered is 140 feet wide by 800 feet long and the grade depth is 21·5 feet below the standard improvement plane at Sault Ste. Marie.

An order-in-council was passed August 6, 1913, authorizing an extension of contract No. 8960, with the Soo Dredging and Construction Company, Ltd., of Sault Ste. Marie, Ont. The work covered by this authorization consisted of the removal of 16,000 cubic yards, place measurement, of class "A" material, to be paid for at the rate of $3.47 per cubic yard, place measurement, and 12,300 cubic yards, place measure-

ment, of class "B" material to be paid for at the rate of 50 cents per cubic yard, involving an expenditure of $61,670.

On September 1, work was commenced and continued until December 31, when work was closed for the season. During this period, 2,519 cubic yards of class "A" material and 17,675 cubic yards of class "B" material were removed, amounting to an expenditure of $17,558.43.

On May 4, 1914, authority was given to allow the contractors to proceed with this work for which the sum of $35,200 had been provided. Work was commenced on April 24, and closed for the season of December 3. During this season, 2,864 cubic yards of rock, and 4,469 cubic yards of class "B" material were removed with a total expenditure amounting to $12,172.58.

The total quantities removed on this contract to date amount to 5,383 cubic yards of rock, and 22,104 cubic yards of class "B" material, for which estimates have been returned in favour of the contractors amounting to $29,731.01.

There still remains a small quantity of material to be cleaned up to complete the work. It might be noted that the original estimate was wrong in respect to classification, and that much less rock was encountered than expected. This is to be explained by the fact that it was impossible to obtain definite information from borings, as the overlying material was a mass of imbedded boulders and stones

*(C) New Ontario dock slip.*

The object of this work was to provide a slip 520 feet long by 75 feet wide to a depth of 21½ feet below standard improvement plane, to enable coal barges to land along the side of the coal wharf. This company handles over this wharf upwards of 35,000 tons of coal per annum.

Work was commenced on this contract in July, 1912, in both the New Ontario dock slip and the ferry dock slip, and during that season 3,643 cubic yards of rock and 10,939 cubic yards of stone and mud, measured in place, were removed, representing an amount paid to the contractors of $22,705.09.

Work was resumed in May, 1913. During the season, 1,472 cubic yards of rock and 395 cubic yards of boulders and mud representing an amount included in the estimates of $5,471.24.

During the season of 1914, this slip was finally swept and cleaned, but no expenditure was incurred.

The total amount removed to date is 5,115 cubic yards of rock and 11,334 cubic yards of boulders and mud, place measurement, respectively, representing an expenditure payable to the contractors of $28,176.33.

*(D) Ferry slip.*

The object of this work was to provide a slip alongside the ferry wharf 300 feet long by 60 feet wide to a grade depth of 21·5 feet.

Work was commenced on August 2, 1913, and continued until September 6. During this period, 4,830 cubic yards of class "A" material and 3,776 cubic yards of class "B" material were removed and towed away in scows a distance of about one mile, involving an expenditure of $20,234.02.

There was no expenditure incurred during the year 1914, but the work has still to be cleaned up to grade.

SEVERN RIVER.

The Severn river, County of Ontario, runs from Lakes Couchiching and St. Johns, flowing through the Township of Rama and District of Muskoka in a northerly and then westerly direction, emptying into the Georgian bay, and forms part of the Trent Valley canal system.

A contract was let on April 11 to Mr. J. O. Roddick for the sum of $8,925, unit rate, to construct two dams. Work commenced on June 1, and was completed September 8, 1914. The work consisted in the construction of two reinforced concrete dams, one 49 feet long over all and 14 feet wide at Little Falls, and the other 84 feet long and 14 feet wide at Big Falls, also the enlargement of the channel at Big Falls for a distance of 100 feet up-stream from the flooring of the dam for the full width between the abutment to a depth of elevation 715.

On November 23, 1914, authority was given to expend $50 in the removal of some rock from below the dam at Little Falls, which was done.

The expenditures for the fiscal year 1914-15 are $10,057.31.

## SHANTY BAY.

Shanty Bay in Simcoe county, township of Oro, is on the north shore of Kempenfeldt bay, which is a branch off Lake Simcoe. It is 7 miles east of Barrie on the North Bay branch of the Grand Trunk railway and has a population of 100. It is also a farming centre and summer resort.

On June 12, 1914, authority was given to expend $4,500 in the renewal of the wharf at this place. Work was commenced on October 7 and was completed by November 25, 1914, and consisted of the construction of a wharf having cribwork substructure and concrete superstructure 78 feet long by 18 feet wide, connected to the shore by an existing timber and earth approach, the mean length of which is 30 feet long and 18 feet wide.

The remains of the old wharf which had been wrecked were dredged out as well as the seat for the new crib. The material removed from the crib seat was overcast to the west of the wharf, therefore to make a proper slip on this side, further dredging will be required.

The total expenditure for the fiscal year 1914-15, was $5,363.

## SILVER CENTRE.

Silver Centre is a mining district in the Township of South Lorrain, on the west shore of Lake Timiskaming, 22 miles south of Haileybury, District of Nipissing.

Repairs were made to wharf, September 15 to 19. Thirty-four braces were replaced on pile bents, some 3-inch flooring was replaced, 28 feet of new ice boom was built, the old boom overhauled and minor repairs made to sheeting on landing face.

Expenditure to March 31, $249.32.

## SOUTHAMPTON.

Southampton, in the County of Bruce, has a permanent population of about 1,800, which is greatly increased during the summer months by the summer cottagers as referred to in the report of Saugeen river. This harbour which is the principal one for the town of Southampton is generally known as "Chantry Island."

The principal industries of the town are furniture manufacture and fishing. The Grand Trunk railway laid a special spur line to this harbour which is capacious, and for the old-time draught vessels is a harbour of refuge.

On May 5, 1914, authority was given to repair the breakwaters by day labour. Work was commenced on June 1 and consisted in the reconstruction of the inside faces of the breakwaters, viz., 430 feet in one section and 200 feet in another section of the western breakwater, 400 feet of the eastern breakwater and placing 40 cords of stone around the head of the eastern breakwater, in addition to general repairs to the decking.

The work also consisted of reconstructing 430 feet in one section and 200 feet in another section of the rear or southerly face of the western breakwater from water level up to top, including new ties which were spliced to remaining solid portion of old ties, and re-decking.

The first 400 feet out from shore of the eastern breakwater was redecked; the next 450 feet for three timbers down and 200 feet for two timbers down were renewed on the outer or northerly face. The remainder of this easterly breakwater had the decking patched and repaired principally with new lumber.

The total expenditure for the fiscal year 1914-15, was $8,795.46.

SOUTH BAY.

South Bay is in Prince Edward county, about 12 miles from Picton, on Lake Ontario. It is more properly a district with a scattered population, served by several small post offices.

Dairying, fruit growing and canning are the principal industries, and coal for local consumption the principal import.

Authority was given on June 12, 1914, to have the departmental dredge *No. 105* perform the desired dredging at several points in the bay; the estimated amount of which was 55,900 cubic yards, scow measurement.

There are five points at which the work was completed to a depth of 9 feet or over, below low water level:

*1st at Waupoos,* between June 30 and July 4, when 7,542 cubic yards, scow measurement, were removed between the 6th and 8th August, when a further amount of 1,418 cubic yards was removed, in all 8,960 cubic yards scow, and 6,720 cubic yards, place measurement were removed; allowing 25 per cent expansion between place and scow measurement. The material was mud and clay and was taken from an irregular-shaped area in front of the two wharfs, having an average length of 500 feet and width varying from about 100 to 200 feet.

*2nd, Waupoos Island.*—On July 6 and 7, 1,108 cubic yards, scow, or 831 cubic yards, place measurement, were removed from in front of the wharf, the area being 220 feet long by 25 feet wide, and having two arms, one at each side of the wharf 40 feet long and 25 feet wide.

*3rd, Port Milford.*—Between July 9 and 25, 9,130 cubic yards, scow, or 6,848 cubic yards, place measurement, were taken from in front of The Port Milford Canning Company's wharf and another wharf further east, for a total length of 900 feet and width varying from 80 to 130 feet.

*4th, Farmer's Dock.*—Between July 27 and August 3, 2,258 cubic yards, scow, or 1,694 cubic yards, place measurement, were removed from an area extending 180 feet out from and 125 feet across in front of the wharf.

*5th, Collin's Dock* (which is a quarter of a mile east from the Port Milford Canning Company's wharf).—On August 4 and 5, 562 cubic yards, scow, or 421 cubic yards, place measurement, were taken from a cutting 220 feet long by 25 feet wide, in front of a storehouse and coal shed wharfs.

The whole amount taken from these five places was 22,018 cubic yards, scow measurement, or 16,514 cubic yards *in situ,* of mud and clay, which fills well into a scow, as far as expansion is concerned, the principal difference between the two measurements being in the way the scow pockets are filled.

SOUTH LANCASTER.

The town of Lancaster, situated in the County of Glengarry, 54 miles from Montreal, has a population of about 1,000; it is a station on the Grand Trunk railway.

South Lancaster is situated one mile and a half south of Lancaster, on the north shore of Lake St. Francis.

A wharf was constructed in 1901. It consisted of a headblock 83 feet in length by a width of 73 feet, on piles, and a solid stone embankment, 341 feet 6 inches long, from shore to headblock, by a width of 20 feet at the top, with slope 1 in 1 on both sides; a storehouse and waiting room was erected thereon.

During the present fiscal year, improvements to the wharf were effected as follows:

1. One-third of the headblock was renewed from low water to top.
2. The shed was repaired and painted.
3. The pile approach was renewed for a distance of 25 feet.

This work was performed by day labour at a cost of $797.41.

### SOUTH PORCUPINE.

South Porcupine, a mining town on the Porcupine branch of the T. and N. O. railway, is situated at the south end of Porcupine lake.

In the summer of 1912, a pilework wharf, approach 12 feet by 144 feet long and landing head 33 feet by 40 feet was constructed. In the spring of 1913, the wharf was greatly damaged by ice-shove. Later in the year repairs and improvements were made.

Further necessary repairs and improvements were carried out July 27 to August 20, 1914, when rock-filled cribs were placed in landing head and approach. The whole structure was sheeted with 2-inch plank.

Expenditure to March 31, $962.12.

### STURGEON FALLS.

Sturgeon Falls, a town in Nipissing district with a population of 2,200, is located on the main line of the Canadian Pacific railway, 24 miles west of North Bay, on the Sturgeon river, five miles from its mouth, on Lake Nipissing.

The construction of the extension to the cribwork wharf was carried out February 6 to March 31.

The cribwork extension on the west side of the old wharf provides 99 feet new landing face, with a minimum draught of 9 feet, and built to an elevation of 6 feet above M.L.W.L. (elevation 640). The bottom portion of crib is built 22 feet wide, of round timber bought for job and part of timber salvaged from North Bay breakwater and transferred to Sturgeon Falls. The superstructure is of timber 6-inch by 8-inch also from the breakwater and new 10-inch by 10-inch and 3-inch floor, 18 feet wide. A 9-foot slip is provided. The landing face is sheeted with 2-inch plank from elevation 639 to 646.

Ballast, which was purchased for $175, was obtained from the foundations of the old smelter buildings. A roadway 18 feet wide was graded from extension to Bay street and the rear of cribwork filled with rock and earth to elevation 646, ranging in width from 6 to 30 feet.

Expenditure to March 31, $2,843.23.

### *Dredging.*

Owing to the fact that the Sturgeon river is used extensively for log driving operations, and during the navigation season is more or less obstructed by logs, and at times to such an extent that boats have great difficulty in getting through to Sturgeon Falls, a log channel was dredged with the object of diverting the current away from the wharf immediately down the river and thereby prevent large numbers of logs from drifting in that direction.

The departmental dredge *No. 112* worked at this point on the Sturgeon river (October 5 to November 17) making a cut 760 feet long by about 100 wide on top, sloping to 45 wide on the bottom, to a grade depth of 18 feet or elevation 622.

Nineteen thousand nine hundred and ten yards, scow measurement, sand were removed.

About 100 lineal feet of this cut was not completed last season, and it is estimated that it will necessitate about one week's work next season for the removal of 3,000 yards, scow measure.

STURGEON RIVER CHANNEL.

The departmental dredge *No. 112* worked at the outer end of the Sturgeon river channel, September 18 to October 3, with the object of giving a better entrance to dredged channel from Lake Nipissing. An area of 48,975 superficial feet was dredged to a grade depth of 14 feet. To provide a basin for the gas buoy moored at the channel entrance, an area of 4,725 feet was dredged to a grade depth of 20 feet.

Twelve thousand four hundred and eighty yards, scow measure, of sand and clay were removed.

SUMMERTOWN.

Summertown, a post village in Glengarry county, is situated on Lake St. Francis, 3 miles from Summertown station on the Grand Trunk railway, 8 miles east of Cornwall, and 6 miles west of Lancaster. In the vicinity are the summer resorts of Stanley and Hamilton's islands. It has 2 stores, besides telegraph and telephone offices. Population, 150.

The public wharf, built in 1886-7, consists of:—

1. A close-faced head block 120 by 20 feet, standing 15 feet high in 9 feet of water at low level.
2. A stone approach 90½ by 20½ feet connecting with head-block by a 22-foot span.
3. A shed 24 feet 4 inches by 30 feet along western side of stone approach.
4. A cattle yard near shed.

During the present fiscal year, improvements to wharf were effected as follows: 1,500 square feet of flooring were renewed; new fenders and sidewalk were built; a pipe railing 200 feet long was erected; the shed was repaired and painted and the stone riprap of approach was repaired.

This work was performed by day labour at a cost of $800.27.

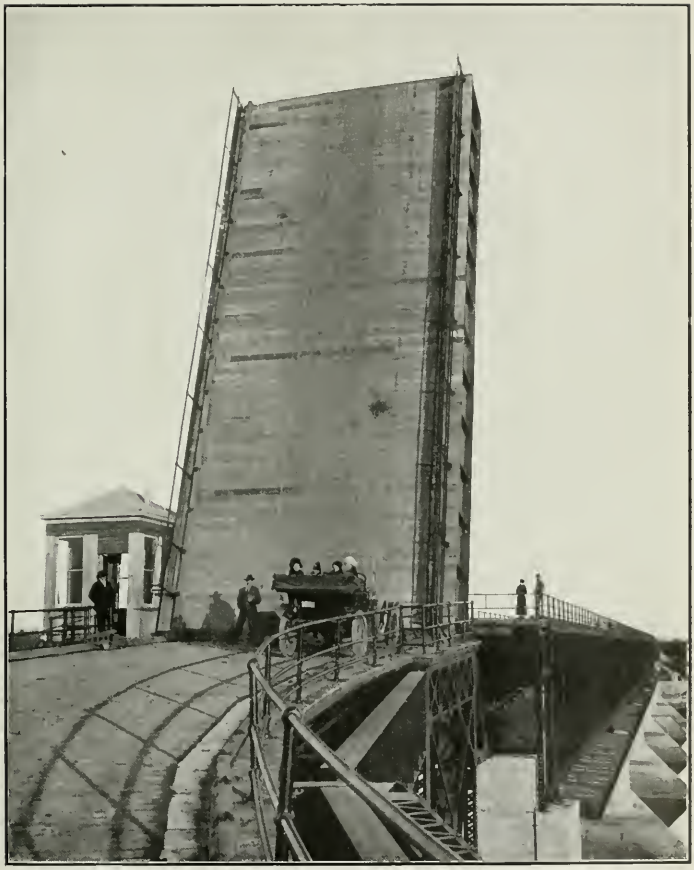
THESSALON.

Thessalon is a town of some 1,400 in population, situated on the north shore of the north channel of Lake Huron, and on the Soo line branch of the Canadian Pacific railway, about 50 miles east of Sault Ste. Marie. Lumbering is the chief industry and large quantities of logs and lumber are shipped annually. There is also a considerable development of agriculture in the surrounding district. The trade over the wharf consists largely of general merchandise, coal and machinery. It is also a port of call for all steamboats of the regular lines plying through the north channel.

Authority was given on July 9, 1914, to construct a concrete superstructure on the wharf.

Work was commenced on July 21, and was closed for the season on November 21, 1914. The wharf was in such a badly decayed condition that it was found necessary that it be repaired at once to safeguard the public and general shipping.

The work consisted of removing the old decayed superstructure of timber and replacing it with a concrete superstructure 175 feet long by 22 feet wide, and the building of a small timber crib 60 feet long by 12 feet wide in 8 feet of water, to be used as a protection for small craft lying at the wharf. In the performance of this work, some 12,000 feet of 1-inch pine lumber, 5,400 feet of 2-inch pine lumber 2,067 lineal feet of round pine and tamarack, 7,280 feet of 1-inch and 9,600 feet of 2-inch hemlock lumber, 5,083 pounds of iron and nails and 429 barrels of cement were used, with a total expenditure of $4,645.59.



St. Andrews Lock and Dam. Approaches to highway bridge, showing Strauss bascule lift.

THORNBURY.

Thornbury, in the County of Grey, is a town of about 1,200 inhabitants, situated at the mouth of the Beaver river which empties into the Georgian bay. It is on the Meaford branch of the Grand Trunk railway 8 miles east of Meaford and 14 miles west of Collingwood.

Lumbering is carried on extensively and there is also a chemical works where hardwood is converted into wood alcohol, charcoal, etc. The surrounding county is very fertile and the apple trade is a leading industry.

On May 4, 1914, authority was given to expend $500 on repairs to the western breakwater by day labour, consisting of the renewal of decking and stringers; work was commenced on May 9, and completed by June 10. The total cost of this work was $476.37.

On May 5, 1914, authority was given to expend $17,000 for harbour improvements and a contract had been awarded to Messrs. Horton & Stoddart for the sum of $15,844.55 approximately, at unit prices.

Work was commenced on March 19, and was completed on December 3, 1914, and consisted of a revetment wall in front of the old timber dock, which had become unserviceable on account of decay. The structure is 411 feet long and is built with face piling having steel main piles with 10-inch wooden piles between for substructure and concrete superstructure, all tied or anchored in the bank behind.

The expenditure on this contract was $16,639.06.

TOBERMORY.

Tobermory, in the County of Bruce, is situated on the northwesterly extremity of the Saugeen peninsula, and is perfectly sheltered from the influence of storms on the lake. There are two arms to the natural bay: the east and the southwest; the latter extending 900 yards in length with an average width of 100 yards. The low-lying shore, which is of limestone, sinks almost perpendicularly to a depth of from 7 to 8 fathoms to soft mud, which is maintained over the whole arm, excepting near the lower end where there is a flat of about 120 yards, where only an 18-foot depth is found.

There is not sufficient width to this harbour to allow of vessels being anchored with a single line, and they have to make fast to the shore, therefore in order to protect these vessels from chafing against the rock, the Government has placed glance booms.

There are about 20 families residing here who are principally occupied in the fishing industry.

On September 12, 1914, the expenditure of $75 was authorized for repairs to the glance booms by day labour, and on November 5, $100 additional for the same purpose.

The booms had been damaged by wear and tear of vessels colliding with them.

Work was commenced 2nd and completed 8th of October.

Total expenditure for fiscal year 1914-15 was $121.15.

TORONTO.

Toronto, County of York, is a city of some 445,000 inhabitants situated on the north shore of Lake Ontario. The harbour is formed of a circular basin called Toronto bay, 1½ miles in diameter, which is separated from the lake by a large island, formerly a peninsula, about 6 miles long. By this means, a safe, well sheltered harbour capable of development to accommodate almost any number of vessels has been formed. Into this basin are three entrances, viz., the eastern, the old western and the new western channels.

Toronto has many important industries, over 900 factories being engaged in the manufacture of foundry products, wool, leather, clothing, agricultural implements, distilleries, breweries, etc. Excellent shipping facilities are afforded by the Grand Trunk railway, Canadian Pacific railway, Canadian Northern railway, and radial railways, also several regular steamship lines plying on the Great Lakes making the city of Toronto the principal port of call.

The Dominion Government has undertaken the construction of certain harbour improvements, consisting of a sea wall, breakwater, ship channel and retaining walls, and by Order in Council of September 15, 1913, acceptance of the tender of the Canadian Stewart Co., Ltd., of Toronto, at the unit prices quoted in said tender, entailing an approximate expenditure of $5,371,372.17 was authorized; of this amount authority was given to expend $900,000 during the fiscal year 1914-15.

The contract is divided into four sections, namely:

*Section "A."*—A sea-wall approximately 17,295 feet long, consisting of a pile-bent structure, surmounted by a reinforced concrete superstructure. This section extends along the lake front from the eastern channel to Woodbine avenue, and will be built out about 700 feet from the present shore line.

*Section "B."*—A breakwater approximately 18,600 feet in length, built of timber crib-work, with concrete superstructure, built in sections 800 to 1,500 feet long, with openings 40 feet wide between return walls at the ends of each section. This section extends from the new western channel to a point at the mouth of the Humber river along the lake front, and will be built out about 900 feet from the existing shore line which, as is the case with the sea-wall, will form a great protection to the shore.

*Section "C."*—A ship channel and turning basin, approximately 16,705 feet long, constructed of pile-work retaining walls, with concrete superstructure. This section forms the nucleus of the new industrial site scheme which has been undertaken by the Toronto Harbour Commission, and is located at the easterly end of the Toronto bay, commonly known as Ashbridge bay, but which has been re-named Toronto Harbour Industrial District. This section, when completed, will give about 3½ miles of wharfage accommodation, adjacent to the proposed warehouses and factories, to the largest vessels that travel the Great Lakes.

*Section "D."*—Retaining walls of a length of approximately 6,894 feet, consisting of pile-work with concrete superstructure, also timber crib-work. This section extends along the western limit of the proposed new industrial site, along both sides of the Don diversion, and is intended to allow for the construction of docks as may, in future, be required. Back filling performed by suction dredges will be hydraulically placed behind these sections, which when completed will form the reclaimed areas to be known in the future as the Toronto Harbour Industrial District.

*Section "A" sea wall.*—Actual construction of this proposed pile and reinforced concrete retaining wall has not yet been commenced.

*Section "B" Breakwater.*—Commenced crib building on May 28, 1914, the first crib being sunk in position at the west or Humber end of the work on July 31. From that date to March 31, 1915, 27 100-foot standard cribs and 5 30-foot return cribs have been sunk. Of these, 10 were built 14 feet in width, 17 16 feet in width, and the return cribs in accordance with the above. All were sunk on a sandy bottom and practically filled with stone. Along both faces of this crib-work 947 piles, 28 and 30 feet long, have been driven in place at 5 feet centres. On June 23, 1914, preparatory to sinking of these cribs, commenced dredging berths at the Humber end, working in an easterly direction, in all 56,149 cubic yards, scow mesaurement, of sand, clay, etc., having been removed.

Work was also commenced at the eastern end of this breakwater, 10 standard cribs 14 feet in width and 2 30-foot return cribs having been scribed and sunk on a rock foundation and partially filled with stone. Authority was granted to substitute cribs 16 feet in width on the rock at the easterly end of the western breakwater in place of cribs 14 feet in width. Owing to this substitution the contractors were required to perform certain additional work at a total cost of $2,688.16.

*Work performed.*

| | | | |
|---|---|---|---|
| Hemlock in cribs not sunk .. .. .. .. Feet b.m. | 168,370 | ·040 | 6,734.80 |
| Hemlock in cribs sunk .. .. .. .. .. .. " | 1,851,317 | ·047 | 87,011.90 |
| Crib filling stone .. .. .. .. .. .. ..Cubic yards | 22,292 | 1·85 | 41,240.20 |
| Dredging crib seats .. .. .. .. .. .. " | 56,149 | ·375 | 21,055.88 |
| Round piles driven beside cribs and not cut off .. .. .. .. .. .. ..Lineal feet | 25,472 | ·34 | 8,660.48 |
| Cut off portion of round piles.. .. .. " | 2,741 | ·16 | 438.56 |
| | | | $165,141.82 |

*Section "C" ship channel and turning basin.*—Actual construction was commenced on June 10, 1914, and the following progress has been made: Round bent piles and anchor piles have been driven, over a length of 5,380 lineal feet of wall, of which 4,214 lineal feet have been cut off and capped with 6 by 12 by 21 foot hemlock caps. The 10 by 12 by 20-foot stringers have been laid over a length of 4,169 lineal feet of wall, and 2,937 lineal feet has been close-sheeted with 12 by 12 by 40-foot B.C. fir sheet piling.

British Columbia fir waling 12 by 12 by 22-foot has been laid over 735 lineal feet of wall, together with the necessary structural steel, and all anchored back with 2-inch diameter anchor rods extending to the anchor piles 50 feet to the rear of the wall. No concrete blocks have been made or placed to date.

The hydraulic dredge *Shuniah*, employed under the direction of the Canadian Stewart Co., commenced the necessary excavations to build northern slip, marginal way and ship channel walls on May 25, 1914, and to date 426,978 cubic yards of sand, etc., have been dredged and deposited as back filling where directed.

The following is a summary of work performed and expenditure and unit schedule prices, during the fiscal year 1914-15:—

*Work performed.*

| | | | |
|---|---|---|---|
| Round piles driven and cut off.. .. .. .. ..Lineal feet | 401,277 | ·40 | 160,510.80 |
| Cut off portion of round piles .. .. .. .. " | 26,208 | ·16 | 4,193.28 |
| Sheet piles driven and cut off .. .. .. .. ..Feet b.m. | 478,454 | ·0575 | 27,511.10 |
| Sheet piles driven not cut off .. .. .. .. " | 717,681 | ·0533 | 38,252.40 |
| Cut off portion of sheet piles .. .. .. .. " | 71,657 | ·040 | 2,866.28 |
| Sheet piles fabricated and not driven .. " | 43,972 | ·002 | 87.94 |
| Round piles pointed and headed but not driven .. .. .. .. .. .. .. .. ..Lineal feet | 4,560 | ·012 | 54.72 |
| Hemlock .. .. .. .. .. .. .. .. .. .. ..Feet b.m. | 151,980 | ·090 | 13,678.20 |
| B.C. fir in place .. .. .. .. .. .. .. " | 10,560 | ·095 | 1,003.20 |
| Drifts, bolts, nuts, washers and rods.. ..Pounds | 125,709 | ·047 | 5,908.32 |
| Structural steel .. .. .. .. .. .. .. " | 32,987 | ·037 | 1,220.52 |
| Dredging necessary to build walls .. .. ..Cubic yds. | 426,978 | ·185 | 78,990.93 |
| | | | $334,277.69 |

*Section "D" Retaining Walls and Northern Slip.*—Actual construction work commenced on April 27, 1914, northern slip work being undertaken first. Round bent piles and anchor piles have been driven and cut off over a length of 6,540 lineal feet of wall. Caps 6 by 12 by 8 foot 6 inches have been laid over 3,729 lineal feet, 6 and 10 by 12 by 20 foot stringers over a length of 3,704 lineal feet of wall. Sheet piles, 12 by 12 by 40 feet B. C. fir, were driven for a length of 2984 lineal feet. Owing to rock being encountered at a higher elevation than was expected, or as shown by the borings on the contract plans, it was judicious to substitute 12 by 12 B.C. fir sheeting in 34 foot lengths over 300 feet of wall in place of 40-foot lengths as specified, the sheeting in all cases being driven to rock.

B.C. fir waling 12 by 12 by 22 foot has been laid over 1,179 lineal feet of wall, together with specified structural steel and anchored back by 2-inch diameter anchor rods extending to the anchor piles 50 feet to the rear of the wall.

Timber superstructure has been constructed for a length of 1,179 lineal feet. This superstructure consists of 10 by 10 by 20 foot face timbers and 8 by 10 crossties and longitudinals in varying lengths, with necesary bolts, nuts, and washers, all as required by specification.

The following is a summary of work performed and expenditure and unit schedule prices during the fiscal year 1914-15—

*Work Performed.*

| | | | |
|---|---|---|---|
| Round piles driven and cut off . . . . . Lineal feet | 152,399 | ·40 | 60,959 60 |
| Round piles driven not cut off . . . . . " | ..... | ·34 | |
| Cut off portion of round piles . . . . . Feet, b.m. | 15,095 | ·16 | 2,415 20 |
| Sheet piling driven and cut off . . . . . " | 1,224,035 | ·0575 | 70,382 01 |
| Sheet piling driven not cut off . . . . . " | 64,423 | ·0533 | 3,433 75 |
| Cut off portion of sheet piles . . . . . " | 85,168 | ·040 | 3,406 72 |
| Sheet piles fabricated and not driven . . . Lineal feet | 43,972 | ·002 | 87 95 |
| Round piles pointed and headed but not driven . . . . . " | 4,560 | ·012 | 54 72 |
| Hemlock in place . . . . . Feet, b.m. | 289,880 | ·07 | 20,291 60 |
| B.C. fir in place . . . . . " | 15,504 | ·095 | 1,472 88 |
| Drift bolts, nuts, washers and rods . . . . . Lbs. | 196,296 | ·047 | 9,225 91 |
| Structural steel . . . . . " | 67,761 | ·037 | 2,507 15 |
| Dredging necessary to build walls . . . . Cubic yards | 50,097 | ·185 | 9,267 95 |
| | | | $183,505 44 |

Work was started by unloading piles and timbers on the Ashbridge bay service ground about the beginning of April. Actual work was commenced on April 27, 1914, and continued expeditiously until December 11, 1914, when ice conditions made further progress impossible. The piles, timber and other material required for the works were delivered on the service grounds up to March 31, 1915. Engineering and supervision of these contract works were carried out by the engineering staff of the Department of Public Works from a field office, erected by the contractors on the works and subsequently the authority offices at No. 703 Confederation Life Building were rented and utilized as an accounting office.

A comprehensive system of borings and soundings has been taken over Ashbridge bay district during the winter months. Test borings were sunk to rock by means of a cyclone drill and a crew of six men.

The following is a summary of the total expenditure incurred in connection with the Toronto harbour improvements during the fiscal year 1914-15:—

| | | |
|---|---|---|
| Estimate of work done to date | $682,924 95 | |
| Extra work done to date | 2,688 16 | |
| Materials delivered 50% to date | 132,508 82 gross. | $818,121 93 |
| Drawback 10% of work to date | | 68,292 49 |
| | | $749,829 44 |
| Less progress estimates, 1913-14 | | 8,971 30 |
| Progress estimates, fiscal year 1914-15—net total | | $740,858 14 |
| Inspection and supervision | | 12,930 16 |
| Equipment and general expense | | 4,780 97 |
| Total to date | | $758,569 27 |

*Repairs.*

Many improvements and alterations have been carried on from year to year, some of which comprise the three entrances which are designated as the "Eastern," "Western" and the "New Western"; all of which are protected by piers. Extensive protection works have also been constructed along part of the exposed lake shore of the island; the formation being of sand with a length of about 6 miles.

On May 6, 1914, authority was given for the renewal of 300 feet of the superstructure of the east pier of the eastern channel.

On October 9, 1913, a contract for this work was awarded to the R. Weddell Co., for the sum of $13,398.

Work was commenced June 1 and was completed September 10, 1914, and consisted in removing the old wooden superstructure, cutting off old face piles and rebuilding same of concrete filled with stone for a length of 300 feet by a width of 20 feet.

On May 5 last, authority was given to renew 300 feet by day labour of the east pier of the eastern channel adjoining the work performed by the R. Weddell Company and subsequently it was deemed expedient to extend the work an additional 60 feet on account of some weak points in the old cribwork where the 300 feet terminated.

The work was of a similar nature to that performed by the R. Weddel Company being a concrete reinforced shell filled with a stone core.

Authority was given to protect the island shore and work was commenced August 1 and closed for the season November 30, and consisted of placing large stones in the island breakwater and constructing two stone groynes on previously built pile substructure approximately 100 feet in length by 12 feet in width.

In addition to the foregoing work, there is the general harbour improvement contract with the Canadian Stewart Company.

Total expenditure for fiscal year, 1914-15, was:—

| | |
|---|---|
| *Re* east pier, eastern channel | $37,264 42 |
| *Re* island breakwater | 7,686 53 |

TRENT BRIDGE.

Trent Bridge is in the northwest corner of Northumberland county, on the Trent Valley canal system, about 2 miles by road from Havelock, a divisional station on the Canadian Pacific railway. Population, about 1,000.

Some work had been done towards the construction of a wharf in the fall of 1913, but work was set back time and again on account of the Department of Railways and Canals objecting to the site selected for the wharf.

Authority was given to complete the construction of the wharf by day labour.

A crib 100 by 20 feet had been built ready for launching and concrete blocks were made, but as the site had been changed it is necessary to have a berth dredged; satisfactory arrangements could not be made with the owners of the only available dredge to perform the work at a reasonable figure, therefore the completion of the work has been delayed.

The total expenditure for the fiscal year 1914-15, was $1,669.08.

TRENTON.

Trenton is in Hastings county, on the Bay of Quinte, at the mouth of the Trent river. It is quite an important commercial and manufacturing centre, the latter principally on account of the water-power derived from the canal. It has a population of 4,300. The Grand Trunk, the Central Ontario branch of the Canadian Northern and the Toronto-Ottawa branch of the Canadian Pacific railways, all run through or close to the town, and it is a port of call for all the regular lake liners.

A contract had been awarded the R. Weddell Company during the fiscal year 1913-14, for dredging a channel 150 feet wide from Trenton out through the Bay of Quinte in a northwesterly direction for a distance of 12,900 feet, passing to the north of Baker's island, and to a depth of 14 feet or over below low water level.

The estimated quantities were 13,350 cubic yards, class "A", and 255,600 cubic yards, class "B" material, *in situ*, and the prices specified were $3.95 for the former and 22 cents for the latter per cubic yard, place measurement.

There was a sum of $72,774.50 appropriated for the blasting and dredging, and $2,225.50 for inspection of operations during the year 1914-15, some of the work having previously been completed.

Authority was given on April 20, 1914, to resume operations.

Work commenced again on May 5, and was completed on September 17.

During the fiscal year 1914-15, there were 13,350 cubic yards of rock, class "A", and 249,274 cubic yards of other material, class "B", removed.

The total expenditure for the fiscal year was $72,340.43.

VAIL'S POINT.

Vail's Point, in the County of Grey, is not a village but merely a convenient shipping point, principally for fruit for the population of the northern portions of the townships of Sydenham and St. Vincent. The point is situated at the northern extension of the boundary line between the said townships on the Georgian bay, and about 16 miles from both Owen Sound and Meaford.

The surrounding country is prolific in apples, live stock and general farming. The nearest post offices are Morley and Johnson.

A contract was awarded to Messrs. W. A. Grier and J. A. Creighton on December 1, 1913, for the construction of a wharf for the sum of $6,983.

Work was commenced on February 23, and was completed on December 3, 1914.

The work consisted of the construction of a timber wharf filled with stone ballast having a main length of 170 feet, with a 40-foot 'L' and a stone approach 150 feet long, all 20 feet wide. Talus was placed on the water side of the 'L' and around the corners.

The expenditure for the fiscal year 1914-15, was $7,732.

VICTORIA HARBOUR.

Victoria Harbour, Township of Tay, County of Simcoe, is a town of about 1,800 inhabitants, situated about one mile from Port McNicoll and on the opposite shore of the bay. Victoria Harbour is a station on the Midland division of the Grand Trunk

railway. It is a large lumbering centre, the Victoria Harbour Lumber Company having three large saw-mills running to their full capacity during the open season.

On October 21, 1913, a contract was entered into with McFarlane-Pratt-Hanley, Limited, for the construction of a wharf and warehouse; wharf 150 feet in length, 24 in width, timber crib substructure, concrete superstructure; warehouse of frame 45 feet long, 24 wide with a ceiling height of 10 feet.

Work was resumed April 1, 1914, and completed August 10, 1914.

The object in doing this work was for the purpose of providing wharf accommodation to the public. During the season of navigation, a ferry boat plies between the village of Port McNicoll and Victoria Harbour carrying both passengers and freight, and prior to building the government wharf boats landed at the private wharf owned by the Victoria Harbour Lumber Company.

Expenditure for fiscal year, 1914-15, is $6,327.48.

### WELLINGTON.

Wellington is in Prince Edward county, Township of Hallowell, at Skiff harbour near West lake, Lake Ontario, and is on the Central Ontario branch of the Canadian Northern railway about nine miles west of Picton and 17 miles south of Trenton. It has a population of about 700 which is greatly augmented during the summer months by numerous visitors. The surrounding district is highly cultivated.

On April 15, 1914, a contract was awarded to Messrs. McFarlane, Pratt and Hanley for the sum of $84,421, unit rates, for a crib-timber wharf 310 feet long by 75 feet wide; an east pier of close-piling 400 feet long; 200 feet of close-piling inside the harbour on the west side; an entrance pier 1,000 feet long by 20 feet wide, and dredging to 12 feet deep.

Work commenced on May 14 and is still under way.

The work done consists of the completion of the east pier of close-piling, having a length of 400 feet; the driving of 200 feet of close-piling inside the harbour on the west side, some 640 feet of the 1,000 feet of pier is completed, except for the bottom waling and decking and stone filling of which only a quarter has been done. About 66,080 cubic yards of dredging has also been performed.

The expenditure for the fiscal year 1914-15, was $49,521.73.

### WHALEN'S SHOAL.

Whalen's shoal was located about 280 feet to the east of the west shore of Maxwell island and adjacent to the east side of the steamboat channel between Penetanguishene and Parry Sound. The shoal consisting of solid rock has always been a menace to navigation, and for protection has always been marked by a red spar buoy.

At one point on the shoal, the shallowest depth was 0·5 feet. In addition to being a menace to navigation, the shoal interfered with blocks of logs, which were being towed to Midland, Penetanguishene and Victoria Harbour, and in extreme low water the logs would strike the shoal and be forced out of the blocks.

The object of doing this work was to remove this rock shoal, which had a length of 30 feet from north to south and 15 feet from east to west. It was located 280 feet east of the west shore of Maxwell island from the wharf landing and adjacent to the east side of the main steamboat channel.

The material removed consisted of solid granite rock, and the quantity removed, in place measurement, was 23 cubic yards.

The contract rate of payment was a bulk sum of $200.

The work was begun July 28, and completed August 15, 1914.

### WHEATLY.

Wheatly is a village situated on the north shore of Lake Erie and on the line of the Père Marquette railway, about 30 miles southwest of Chatham and 44 miles by

rail from Windsor. Population about 600. It is the centre of a very rich farming district and a considerable amount of fishing is done at this port. It is hoped that during the coming season, this point will be made a port of call by the steamers trading between Kingsville, Leamington and Pelee island.

Authority was received to repair the pier, and expend $4,500 by day labour. A further appropriation of $200 was granted under date of October 19, in order to take care of extra damages caused by a severe storm. Operations extended from July 2 to the 18th of November last, during which time the following works were performed:

(1) The driving in place of 343 lineal feet of 6-inch sheeting 24 to 26 feet in length along different sections of the pier where settlement was occurring. The sheeting was secured to the crib-work by means of long screw bolts extending through the face timbers, sheeting and the two rows of longitudinal waling on outside of sheeting.

(2) The construction of four new courses for practically the entire length of the 200 foot crib along its eastern face and of practically 3 new courses along the western face of same crib.

(3) The placing of one complete set of cross ties in this section of the pier.

(4) The construction of two new courses on southern and northern faces of outer 100-foot crib, the renewal of three snubbing posts and placing of 6 timber heads above L.W.L.

In the above work, all decking and joists required to be removed and replaced and all stone filling above L.W.L. was shifted and replaced and a considerable amount of new decking was found necessary.

The driving of sheeting including the placing of the two rows of longitudinal waling outside of same and the securing of waling and sheeting to the face timbers of crib work was performed by Mr. F. E. Tifft of Blenheim, Ont., at the rate of $3.75 per lineal foot, the materials being furnished by the department.

In the execution of the above work, approximately 52,000 feet b.m. timber, 4,200 pounds of iron were used and approximately 7,900 lineal feet of sheet-piling were driven.

The expenditure for the fiscal year 1914-15 is $4,700.

### WHITBY.

Whitby in the County of Ontario is on the shore of Lake Ontario, about 29 miles east of Toronto. The Canadian Pacific and Grand Trunk railways both touch the town. Besides the main line of the Grand Trunk railway, there is the Whitby and Port Perry branch which runs to the harbour, the latter being about 3 miles from the town and 1½ miles from the Grand Trunk railway station. There is a good farming district surrounding, and the population of the town is 3,400.

On 6th May, 1914, authority was given to complete the harbour improvements which had been awarded by contract on January 13, 1913, to Messrs. Whitney & Code, for $20,000.

Work was resumed on 18th June and completed on 16th October and consisted of reconstructing the superstructure of the east pier with concrete for a length of 1,259 and a width of 10 feet on top, the rear being backed up with stone and gravel.

The total expenditure for the fiscal year 1914-15, was $13,560.36.

### WIARTON.

Wiarton is in the County of Bruce, at the head of Colpoy's bay, off the Georgian bay, about 32 miles from Owen Sound, and is the terminus of the Georgian Bay and Lake Erie Branch of the Grand Trunk railway. This is the most northerly railway point in the Bruce peninsula. The principal industries are lumbering and fishing, the large cement works having shut down. Population, about 2,500.

On May 20, 1914, authority was given to repair the breakwater by day labour, which comprised the refilling of the superstructure with stone and gravel and levelling

it off between the concrete side walls where it has been washed out or misplaced by the storm of November 9, 1913; the work was performed between June 3 and 13, 1914.

The total expenditure for the fiscal year 1914-15, was $102.

WINDSOR.

The City of Windsor is situated on the Detroit river in the County of Essex, and is a terminus in Canada of the Grand Trunk, Canadian Pacific, Michigan Central and Père Marquette railways. It is a thriving and prosperous city with a population of about 25,000. It is a very important port of entry, the customs duties collected in the city, together with the adjoining town of Walkerville, amounting to approximately $1,810,866 for the fiscal year 1914-15. During the fiscal year 1913-14, 830 vessels arrived at this port, having a total registered tonnage of 566,172 tons.

On May 7, authority was received to construct a landing dock which is 484 feet long for which a contract had been awarded on January 25, 1913, to A. E. Ponsford of St. Thomas, Ont., on a pro rata basis; the construction of an extension to this dock of 169 feet 6 inches authorized by an Order in Council dated June 24, 1913; the construction of a reinforced concrete warehouse 160 feet long adjacent to landing dock, for the sum of $7,931, under authority dated April 20, 1914, and several minor extras to the original contract as authorized on several different occasions. Operations were in progress on April 1 and were completed on October 27, 1914.

The actual work performed during the present fiscal year consisted of the following:—

1. Completion of landing dock, including construction of 226 feet of reinforced concrete superstructure and placing of 95 feet of longitudinal sheeting on pile substructure in rear of wharf.

2. Driving in place, 15 clusters of fender piles, framing and bolting, etc.

3. Construction of connection at upstream end of dock with Cadwell's dock, consisting of sheeting and waling.

4. The construction of reinforced concrete warehouse on the pile foundation that had been driven during the preceding season.

The expenditure for the last fiscal year, including inspection, is $25,438.76.

WINNIPEG RIVER.

The Winnipeg river runs from the Lake of the Woods at Kenora, Ont., northwesterly into Lake Winnipeg, Man.

Certain improvements, mainly necessary to navigation interests between Kenora, on the Canadian Pacific railway and Minaki, on the Grand Trunk Pacific railway, and beyond, were authorized by letter, dated June 12, 1914, the work to be done by day labour and not to exceed $5,000.

Work was done at two places as follows:—

1. Lower Miller's rapids, 3 miles north of Kenora, on the east, or steamboat, channel between Kenora and Minaki.

2. Trout rapids, on the west channel some 9 miles north of Kenora.

The necessary plant was assembled at Lower Miller's rapids and the work there, which consisted of the removal of cemented boulders and solid rock was commenced on November 7, 1914. This work was practically all submarine. The work was completed February 9, 1915, some 600 cubic yards of rock having been removed. The channel was widened and straightened and deepened to 8 feet below low water level.

A camp was formed and an outfit started at Trout rapids, on December 14, 1914. Approximately 200 cubic yards of rock were excavated and removed on skids by hand over the ice to the shore. This work was completed January 16, 1915, and was done to prevent flooding due to water backing up in times of high water.

The total rock removed was about 800 cubic yards and the total expenditure for the fiscal year 1914-15, amounted to $4,498.10.

## PROVINCE OF MANITOBA.

### ASSINIBOINE RIVER.

The Assiniboine river is subject to very high water freshet periods, and in consequence much valuable land is flooded.

During 1913-14, the work of building earth embankments to prevent this flooding was begun, and this work was continued during the fiscal year 1914-15.

Approximately 12 miles of this embankment was built during this year by means of ploughs and scrapers. About 66,759 cubic yards of material were handled at a cost of $14,309.74, or a unit price of 21·4 cents per cubic yard.

### BLACK RIVER.

*Dredging.*

It being found necessary to improve the entrance to Black river, Selkirk county, to accommodate steamers employed in the lumber, tie and cordwood trade, and to provide a harbour of refuge, departmental dredge *No. 204* was engaged from August 20 to September 5, cutting a channel across the bar at the mouth of the river.

Length of cut 1,584 feet, width 40 feet, and average depth 4·4 feet. Total quantity removed 10,384 cubic yards, clay and boulders, scow measurement. Average tow, one mile. Depth of water provided was 10 feet.

The cost of the work, including tug service, maintenance and operation, was $1,200.34, equal to 11·5 cents per cubic yard.

A number of buoys to mark the channel were placed at the entrance of the river.

### BROKENHEAD.

*Dredging.*

Dredging on the inside route, between the Red and Brokenhead rivers, Selkirk county, was resumed by dredge *No. 204* which began a cut from Anderson's creek about 3,000 feet south of the cut from Swede creek, thence extending in a straight line towards Jackfish creek.

This dredge worked from June 29 to July 13, making a cut 375 feet long, 40 feet wide and 6·75 feet deep, providing 6 feet of water.

The material removed was 3,757 cubic yards clay, place measurement, cast over. Depth of water provided was 6 feet.

The cost of the work, including tug service, maintenance and operation, was $709.29 equal to 18·8 cents per cubic yard.

Dredge *No. 202* continued the cut towards Jackfish creek, working from August 7 to August 24, making a cut 1,005 feet long, 40 feet wide and an average depth of 45 feet, providing 4·5 feet of water.

The material removed was 6,646 cubic yards clay, place measurement, cast over. Depth of water provided was 4½ feet.

The cost of the work, including tug service, maintenance and operation, was $1,058.45, equal to 15·0 cents per cubic yard.

Summary:—

| | | | | |
|---|---|---|---|---|
| Dredge *No. 204* | 3,757 | cubic yards, | expenditure.. .. .. .. | $ 709 29 |
| " *No. 202* | 6,646 | " | " .. .. .. | 1,058 45 |
| Totals.. | 10,403 | " | " .. .. .. .. | $1,767 74 |

FAIRFORD.

*Lowering Lake Manitoba, Selkirk county.*

A survey at Fairford for the purpose of ascertaining the practicability of lowering Lake Manitoba was made last year. The plans and reports were completed and forwarded to the Department at Ottawa under date of May 14.

As a result of the survey, it was found that the lake could be lowered and maintained one or two feet below the present level by increasing the discharge of its present outlet through the Fairford river.

The estimated cost would be about $50,000.

GEORGE (BIG) ISLAND.

An investigation of the harbour of refuge at Big George island was made and a detailed report sent in under date of October 23, 1914.

This most necessary and urgent harbour could best be supplied by improving the channel into and dredging out the present small natural harbour, which is about 550 feet long by 220 feet wide. The bottom is covered with sand, mud and boulders.

Estimate of cost; 40,000 cubic yards at 25 cents, $10,000. It was recommended that this work be done during the fiscal year 1915-16.

GIMLI.

*Wharf.*

Extensive repairs being necessary to this wharf to make it safe and secure, the following work was done.

During fiscal year 1913-14, the trestle near the shore, 150 feet long, was closed by driving one row of 4 by 12 inch 16 foot sheet-piles on the south side and filling behind with material dredged from the berth in front.

During the present fiscal year, the repairs on this trestle were completed. This consisted of five new 12 by 12 stringers, 3 by 12 decking, and 4 by 12, 16-foot G. & T. sheet-piling along the north side.

From the trestle towards the shore, a distance of 26 feet, the top of the embankment was decked by laying five stringers 12 by 12, 26-foot, covered with 3 by 12 plank and 6 by 12 curb.

From the trestle towards the lake, a distance of 360 feet, being the central portion, the wharf was repaired by driving round tamarac piles 12 by 6, 26 feet long, 5-foot centres. These were capped by 10 by 10, 22-foot 4-inch timbers extending across the wharf and secured to intermediated bearings on old wharf. Over the caps were placed 10 by 10 outside stringers and five 6 by 10 inside stringers throughout the whole central portion. The decking is 3 by 12, 22 feet 4 inches long laid crosswise, tying the whole together. Curb 6 by 10. The caps and stringers are securely held to the piles and each other by bolts and strap-bolts, the latter being made largely of old iron removed from the wharf. The north side of this leg of the wharf was covered with a continuous row of 6 by 12 G. & T. sheet-piles. The mooring posts were reset in a secure manner.

On the next leg, the one upon which the lighthouse is situated, the top wale on the south side of the old portion, a distance of 100 feet, was renewed with 6 by 12 timber.

The cost of the work was $9,278.23.

*Protection Work.*

The water front of that portion of the town of Gimli, south of the Government wharf, is subject to erosion, and in 1908-9, a protection work was first placed along this

shore. It became necessary to repair this work during the year 1913-14, and further repairs and extensions were made during the present fiscal year.

At the north end of the work, 550 lineal feet were repaired by driving round tamarac piles, 16 feet in length, and 8 feet centre to centre midway between the old piles along the face. Two rows of 6 by 8-inch, 32 feet long sheet-pile guides were bolted on the face of the round piles and 3 by 12, 12-feet long sheet piling was driven and secured to the guides with $\frac{7}{8}$ by 8-inch ship spikes. The front row of piles were secure'y braced to the back row which were still in good conditon.

The work begun at the north end during the previous year was completed by driving 68 sheet piles.

At the south end of the old work, the shore had been washed away for a considerable distance and the work was extended for a distance of 293 feet to a concrete protection wall in front of private property. In this portion of the work, 79 round tamarac piles 20 feet in length were driven in two parallel lines at 5-foot centres. Sheet pile guides 6 by 8, 32 feet long were bolted on the front line and 3 by 12 sheet-piling 12 feet in length was driven and secured to the guides by $\frac{7}{8}$ by 8-inch ship spikes.

For a distance of 1,688 feet from the southerly end of the work, the face of the sheet piling was covered with 24 gauge galvanized sheet iron in sheets 3 feet in height. This was placed just at the ground line and has prevented any wash through the work. The iron was fastened with $1\frac{1}{2}$-inch nails.

Twenty-five stone groynes, containing 125 cords of stone, were built along the face of the protection work. These extend from a point near the opening just south of the corner of First avenue and First avenue south, southerly to the concrete wall.

The amount expended was $5,165.45.

*Dredging.*

Departmental dredge *No. 202* worked from August 3 to August 19 at Gimli, Selkirk county, improving the harbour of refuge and berths on the south side of the wharf.

Three cuts were made totalling 1,365 feet in length, 40 feet in width and averaging 3·2 deep, providing $7\frac{1}{2}$ feet water below zero. The material removed was 6,431 cubic yards, scow measurement, clay and boulders. Average tow $\frac{1}{2}$ mile.

The cost of the work, including tug service, maintenance and operation, was $1,189.43, equal to 18·4 cents per cubic yard.

GULL HARBOUR.

The 100-foot extension to the Gull Harbour wharf was practically completed in the fiscal year 1913-14, but the work was inspected and final estimate made in favour of the contractor, Wm. Dewar, Esq., during this year.

The expenditure on the contract was $8,712.65, but the opening between the old and new sections of the wharf was closed by the contractor for the sum of $134.06, making a total expenditure of $8,846.71.

KILLARNEY.

Lake Killarney is connected with Long river by a single channel. The level of the lake is thus influenced by the quantity of water in the river and in dry seasons becomes very low. This causes a great deal of distress in the town of Killarney owing to the stagnation of the water in the lake. It was deemed advisable that during periods of high water in the Long river, a portion of this water should be run through the lake to purify it and to put in dams to maintain the level of the lake as high as possible.

Near the westerly end of the lake, a controlling dam was put in the river and a channel cut 2,150 feet. This channel will carry part of the water of the river to a natural channel leading to the lake. A pile bridge was built on the road allowance over this channel. A controlling dam connected to that in the river was built also dykes to direct the overflow of the river in the freshet season. The old inlet and outlet of the lake was dammed with an earthen dam.

A means of exit for the water had to be provided and a suitable place found at the easterly end of the lake. A controlling dam and a channel 1,020 feet long were built. This channel connects the lake with a valley leading to the Long river. All controlling dams are built of round and sheet piling, with waling and bolted together.

A causeway crosses the lake at the town of Killarney. This was widened and a pile bridge put in it, as it is between the new intake and outlet of the lake. A hand railing was also provided to prevent accidents to teams, etc.

Expenditure, $2,997.83.

### LE PAS.

On July 21, 1914, preparatory work was started on the construction of a public wharf at Le Pas.

The wharf is located in Le Pas river, near the confluence with Saskatchewan river. A small piece of land, ·01 of an acre, has been acquired from the Department of Indian Affairs to improve the approach to wharf at a cost of $75. This is a portion of lot 3, block A, Le Pas Indian Reserve, and its purchase was authorized by an Order in Council dated April 17, 1914. On July 16, 1914, an Order in Council was passed authorizing the expropriation of two areas of land, 0·02 acres and 0·11 acres, from the Hudson's Bay Company. The wharf will be built on the latter piece and the area 0·02 is for the extension of La Rose avenue.

The preparatory work done consisted of clearing the site of an old barge, the building of an approach embankment, driving and capping piles in three approach bents and supplying 395 cubic yards of stone ballast for the wharf. The cost of this was $1,092.94, to which add $75, the cost of the Indian lot, making a total expenditure of $1,167.94.

### LE PAS RIVER.

The proposed construction of a wharf at the mouth of Le Pas river, district of Le Pas, necessitates the dredging of a channel from the wharf site into deep water in the Saskatchewan river of the following dimensions: 1,200 feet long, 100 feet wide and 8 feet deep at low water, requiring the removal of 15,000 cubic yards of material. As there was no dredging plant available for this work, a new dredge, tug and two scows were built at Selkirk and transported by train in knock down shape to Le Pas where they were assembled and fitted out for service, *No. 208* was given the dredge and the name of *Le Pas* to the tug.

Dredging commenced June 10, and a cut approximately 950 feet long, 80 feet wide and 8 feet deep at low water was made, extending from a point opposite the southern end of the site of the proposed new wharf in Le Pas river, out into the Saskatchewan river. Material amounting to 3,960 cubic yards, scow measurement, was removed; this is about one-fourth of the projected work, which has an area of 120,000 square feet, and averages 3½ feet in depth.

The material removed was stiff clay and boulders and towed one half mile. The total cost was $1,580.21, or 39·9 cents per cubic yard. The expansion factor would be about 20 per cent.

Operations were suspended for the season on July 8, and the plant removed to Cumberland lake.

Further dredging will be delayed until such time as the proposed new wharf has been completed and will require the greater part of another season to finish.

NINETTE.

This wharf is built on the end of Queen street in the village of Ninette, Souris county.

A resolution was passed September 1, 1914, by the municipality of Strathcona, expressing the willingness of the council to grant the department a lease of the end of the road allowance upon which to build this wharf.

Material for the wharf was delivered in July.

During October, an earthen embankment, 273 feet long, 13 feet wide, for approach was built. This is riprapped at the end and for some distance along the sides.

During November, pile driving was started and all the work was built from the ice.

The wharf consists of 43 pile bents, 12 foot centres, which with ice-breakers makes a total length of timber work of 516 feet. Each bent has 3 piles and the wharf is 12 feet wide.

Dimensions of timbers, as follows: Caps, 8 by 10; outside and inside stringers, 5 by 10; decking, 3 by 12; curb, 4 by 6.

The expenditure was $2,990.94.

OAK POINT.

*Dredging.*

Oak Point is near the mouth of the Red river and projects into the slough south of the proposed route to the Brokenhead river. It is in the north-east corner of township 15, range 5, east of the principal meridian.

Departmental dredge *No. 202* was employed on this work from June 26 to August 6.

The cut was 3,302 feet long, 40 feet wide and 4 feet deep, amounting to 19,738 cubic yards clay, place measurement. The depth of water provided was 6 feet. This was all cast over.

The cost of the work, including tug service, maintenance and operation, was $2,393.61, equal to 12·1 cents per cubic yard.

ST. ANDREWS LOCK AND DAM.

The St. Andrews lock and dam were operated as usual during the fiscal year 1914-15.

The following items may be noted in connection with the operation of this work: Breather holes were drilled over the south valves to facilitate the movement of the water therein. The valve stems were changed from steel to phosphor bronze, as the steel is subject to very serious corrosion, and the valves were painted with a special graphite paint. The riprapping in the canal approach was practically all renewed. The conduit for the power cables under the lock was found unsatisfactory and a new conduit was constructed, which allows of ready access to the cables.

The expenditure on the maintenance and operation is $15,799.25.

*Grading Banks.*

The work of re-grading the river bank west of and northerly from the St. Andrews lock, was proceeded with this year. This bank, at the time of completion of

the lock, was set to certain slopes and consisted of the clay which had been excavated from the canal approach. When wet, this clay becomes very slippery and as a result slid down out of place. Stone drains were put in, about 1910, which checked further sliding. A portion of the highway was carried away in the slide.

This year, the slopes were replaced, a stone drain put in at the top of the bank and for the full length thereof, and the iron pipe fence completed to the end of the government property.

Some small slides occurred and it was deemed advisable to put off sodding the slopes until the coming fiscal year in order to give the bank a chance to settle.

The expenditure on this work to date, $8,319.24.

RED RIVER.

*New Entrance Channel.*

At the end of the fiscal year 1913-14, work on both sides of the channel was built to station 28 00 from the shore. Close observation during the past summer has shown that wave action has a decided effect upon the pile structure, which is driven in sand and silt, a very unstable material, subject to scouring action. It was therefore decided to double sheet-pile the present work and fill with stone.

One thousand two hundred cords of stone were purchased and delivered on the site of the work in the summer of 1914.

During the summer of 1914, the shore front at the mouth of the new cut was considerably washed away during a storm and high water, thereby endangering government buildings at the edge of the lake. It was necessary to extend the west side protection along the shore of the cut as far south as the first range light, 385 feet of this work were 2 rows of piles 2-foot centres one foot apart and filled with willow brush, and stone was placed behind this work to further protect it. For 457 feet, the bank protection as in the form of Class A work, as built in the regular channel protection; this work ended in a curve outwardly and returns into the bank so as to direct the waves away from the bank to prevent scouring. East side from station 18 00 to 28 00 1,000 feet, protection work was sheet-piled on the outer side, and 900 feet filled with stone as high as possible to allow for sinkage.

From station 13 00 to 18 00, 500 feet, sheet piles were driven on the channel side, making a continuous line of sheet-pile face from shore end to outer end, a distance of 3,200 feet, with the exception of 500 feet between station 2 00 and 7 00. This work will be completed this coming year.

On the west side, from station 22 37 to 28 00, 563 feet, protection works were sheet-piled on the outer side of work and filled with stone.

From station 5 10 to 7 62, 252 feet of class A work was washed out during a bad storm last fall. This was replaced by class B work, which seems to be the only type of work that will stand the action of heavy storms.

The following is a summary of the work done:—

| | | | | | | |
|---|---|---|---|---|---|---|
| East side, station | 18 00 | to | 28 00, | sheet-piled outer side .. | 1,000 | feet. |
| " " " | 13 00 | | 18 00 | " channel side | 500 | " |
| West " " | 22 37 | | 28 00 | " outer side. | 563 | " |
| " " " | 5 10 | | 7 62 | class B work .. .. .. | 252 | " |
| " " " | 1 32 | | southerly along bank, class A work.. .. .. .. .. .. .. .. .. | | 868 | " |

Total feet of work, sheet-piled, constructed and replaced.. 3,183 feet.

*Stone filling—*

| | | | |
|---|---|---|---|
| Station | 19 00 to | 28 00 east side | 900 feet. |
| " | 22 37 | 28 00 west side | 563 " |
| " | 10 00 | 10 85 west side | 85 " |
| | 1 32 | southerly behind bank protection | 385 " |
| Total number of feet of work filled | | | 1,933 |

The total expenditure was $29,991.82.

*Dredging.*

During the winter of 1914, the protection work was extended out to 2,800 feet from the shore, and soundings taken in March showed the necessity of further dredging.

Departmental dredge *No. 201* was employed on this work from May 15 to June 11, July 7 to August 15, and September 7 to September 12, removing 31,557 cubic yards silt, sand and clay, place measurement, at a cost, including tug service, maintenance and operation, of $2,273.58, equal to 07·2 cents per cubic yard. Of the above material, 15,677 cubic yards were dredged along the east side of the cut between the shore and the end of the protection work. This was pumped back of the protection work. The balance of the material was dredged in extending the channel to the north of the protection work, a distance of 1,100 feet, width 130 feet, and depth of cut 3 feet. This was pumped some distance back from the cut on both sides.

Departmental dredge *No. 202* was employed from May 18 to June 25, removing 8,412 cubic yards clay, scow measurement, at a cost, including tug service, maintenance and operation, of $2,016, equal to 23·9 cents per cubic yard. This material was taken from the point formed by the new channel and the centre channel and scowed 1¾ miles. Average length of cut 1,200 feet, width 60 feet and depth 3 feet.

Summary:—

| | | |
|---|---|---|
| Dredge *No. 201*, | 31,557 cubic yards at 07·2 cents | $2,273.58 |
| " *No. 202*, | 8,412 cubic yards at 23·9 cents | 2,016.00 |
| Total..... | 39,969 cubic yards at 10·7 cents | $4,289.58 |

THE FORKS.

Owing to low water, great difficulty was experienced by the deeper draught boats in passing The Forks, Selkirk county, about 3 miles from the mouth of the Red river; consequently it became necessary to keep dredge *No. 201* employed here from June 12 to July 7, during which time, she removed 20,628 cubic yards, place measurement, of hard sandy clay, at a cost of $1,241.76, equal to 6 cents per cubic yard. This includes care and maintenance of the dredge to the end of the fiscal year, also attendance of tug *Victoria* and gasoline launch which were used in laying out the work and handling supplies to the dredge.

Total length of cuts made amount to 1,165 feet, width 140 feet and average depth 3·4 feet. Depth of water, 10 feet.

The material was pumped to either side of the dredged channel.

*Marine Railway.*

For the purpose of providing a sufficient depth of water for the tracks of the proposed marine railway, increasing the depth of water in the approach thereto, remov-

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Marine Railway, Selkirk, Man.

ing the track of the old boat slip and dredging material for backfilling the bulkhead and protection walls, etc., three departmental dredges were employed as follows:—

*Approach basin.*—Dredge *No. 205* worked from May 15 to June 16, removing 14,457 cubic yards gumbo, clay and gravel, scow measurement, dredging to grade for the tracks of the new marine railway and providing an approach thereto.

The cost of this work, including tug service, maintenance and operation, was $2,413.43, equal to 16·6 cents per cubic yard. The area dredged averaged 435 by 120 feet by 7·5 feet deep. For the purpose of doing this dredging, the dipper arm was lengthened. The depth of water provided was from 9 feet to 19 feet below low water.

*Backfilling, filling holes, etc.*—Dredges *Nos. 202, 204* and *205* dredged gravel from the bed of the Red river at a point about one mile above the marine railway for backfilling the bulkhead and protection walls, and filling holes at the outer ends of the bulkhead walls. Quantities and expenditure, including tug service, maintenance and operations, as follows:—

| Dredge. | Date. | Gravel cubic yards scow measurement. | Expenditure. | Cost per cubic yard. |
|---|---|---|---|---|
| 202 | August 24 to 29 | 232 | $ 76 98 | 33·1 cents. |
| 204 | September 7 to 19 | 1,947 | 480 20 | 24·6 " |
| 205 | October 8 to 31 | 7,375 | 1,988 18 | 26·9 " |
| | Totals | 9,554 | $2,545 36 | 26·6 cents. |

The above quantity was distributed as follows:—

| | Cubic yards. |
|---|---|
| Filling at outer ends of bulkhead walls | 684 |
| Deposited at protection wall for backfilling | 8,870 |
| Total | 9,554 |

The above material deposited at the protection wall, viz.: 8,870 cubic yards was lifted by dredge *No. 202* and placed inside the wall. The cost of this, including tug service, maintenance and operation, was $2,511.62, equal to 28·3 cents per cubic yard.

Summary of material deposited back of bulkhead walls, including tug service, maintenance and operation.

Dredged from river by dredges *Nos. 204* and *205*; placed behind wall by dredge *No. 202*:—

| | Cubic yards. | | |
|---|---|---|---|
| Dredge *No. 204*— | | | |
| Total dredged | 1,947 | | |
| Less dumped in holes | 452 | | |
| | 1,495 | | $ 367 77 |
| Dredge *No. 205*— | | | |
| Dredged for backfill | 7,375 | at 26·9 | 1,988 18 |
| Total backfill | 8,870 | | |
| Dredge *No. 202*— | | | |
| Redredging backfill | 8,870 | at 23·9 | 2,511 62 |
| Total cost | | | $4,867 57 |

The cost of the backfill deposited back of the wall, including tug service, maintenance and operation, was $4,867.57, equal to 56·0 cents per cubic yard.

*Removing tracks of old boat slip.*—Dredges *No. 204* and *205* worked removing the tracks of the old marine railway. In doing this, it was necessary to dredge a quantity of clay.

Summary of work on old boat slip, including tug service, maintenance and operation expenses:—

| Dredge. | Date. | Cubic yards scow measurement. | Expenditure. | Cost per cubic yard. |
|---|---|---|---|---|
| *No. 204.* | June 25 to 27, July 14 to 17, September 16, 17, 18, 19, 21 and 28-29 | 1052 | $545 55 | 51·8 cents. |
| *No. 205.* | September 25 to October 2 | 3000 | 414 63 | 13·8 " |
| | Totals | 4052 | $960 18 | 23·6 cents. |

*Test of marine railway.*—The marine railway was tested to the capacity for which it was designed, by loading a barge with 500 cubic yards gravel, which amounted to approximately 1,500 tons gross weight. This was done by dredge *No. 205* on November 2. The barge was found to be leaking, and it became necessary for the dredge to stand by and pump on November 3, 4 and 5.

Dredge *No. 202* stood by and unloaded the barge between November 2 and 7. This material was placed on the bank north of the marine railway, and was eventually placed in backfill.

Summary of work testing marine railway:—

| Dredge. | Date. | Cubic yards. | Expenditure. | Cost per cubic yard. |
|---|---|---|---|---|
| *No. 205* | Nov. 2 to 5 | 500 | $106 33 | 21·2 cts. |
| *No. 202* | " 2 to 7 | 500 | 240 59 | 48·1 " |
| | Totals | | $346 92 | 34·6 cts. |

Summary of all dredging done at marine railway, including maintenance and operation expenses:—

| Location. | Cubic yards, scow measure. | Expenditure. | Cost per cubic yard. |
|---|---|---|---|
| Dredging basin for marine railway tracks, etc | 14,457 | $2,413 43 | 16·6 cts. |
| Dredging material for backfilling, filling holes, etc | 9,554 | 2,545 36 | 26·6 " |
| Placing backfill behind wall | 8,870 | 2,511 62 | 28·3 " |
| Removing old boat slip | 4,052 | 960 18 | 23·6 " |
| Test marine railway, loading and unloading barge | 1,000 | 346 92 | 34·6 " |
| Totals | 37,933 | $8,777 51 | 23·1 " |

The cost of all dredging done at the marine railway, including tug service, maintenance and operation expenses, for 28,563 cubic yards placed is $8,777.51, equal to 30·7 cents per cubic yard.

The above cost includes handling 8,870 cubic yards back-fill and 500 cubic yards for test load twice, so the actual yardage is 37,933 cubic yards, equal to 23·1 cents per cubic yard, including tug service, maintenance and operation.

*Middle ground.*

Owing to low water and the silting up of the navigable channel below Sugar island, about one and one-half miles north of Selkirk, at what is called the middle ground, which greatly increases the danger of ice jams and floods, imperilling the marine railway and private property at Selkirk, dredging was started at the middle ground.

Departmental dredge *No. 201* was employed on this work from August 17 to September 5 and September 14 to November 3, removing 88,187 cubic yards, place measurement, sandy clay, at a cost of $4,291.52, equal to 4·8 cents per cubic yard. This cost includes maintenance and repairs of the dredge also cost of attendance of tug *Victoria* and gasoline launch, these boats being used to lay out work and handle supplies, etc., to the dredge while working on the ground.

There yet remains to be dredged about 4,000 feet by 100 by 3½ feet, equal to 51,850 cubic yards. This represents a widening of the work done in season of 1914.

The material was pumped to the east side of the river and the dump will be protected by Sugar island and the diversion work which is proposed to be built across the channel east of the island.

The area dredged was carefully checked after dredging was done and results show quantity to be in excess to that of the dredge returns. This is due to the channel east of Sugar island being opened up and the resultant current scouring that portion of the middle ground dredged.

PARK POINT, CRESCENT ISLAND.

At a point, a short distance north of Selkirk, opposite the town park and Crescent island, it became necessary to deepen the water for navigation purposes. During the ensuing season, further work will be done.

The dredging consisted of one cut opposite Park point, 344 feet long, 40 feet wide and 8 feet deep, equal to 4,074 cubic yards, scow measurement. The work was done by departmental dredge *No. 205* between October 2 and October 7, at a cost, including tug service, maintenance and operation, of $340.39, equal to 8·3 cents per cubic yard. The material was scowed one mile.

SELKIRK.

The work on the marine railway at Selkirk was completed by the contractors, The Crandall Engineering Company, and tested with a 1,500 ton load, as required by the contract on November 5, 1914. Th railway fulfilled all requirements and is an excellent piece of workmanship, fully capable of carrying any vessel which may be engaged in lake or Red river navigation.

The time of completion, October 15, 1914, as set forth in the contract, was exceeded, due to the fact that urgent admiralty orders delayed the delivery of the hauling chains by the manufacturers in England.

It was found necessary to lower the elevation of the base of the concrete wing walls, so that the woodwork might at all times be submerged and thus better preserved, and to place an inner line of sheet-piling to prevent ice forming under the wall and consequent damaged due to heaving. The floor of the power-house was placed on steel beams instead of the earth as called for in the plans.

In one or two places, it was found that the dredging performed by the department had not been of sufficient depth to allow the track to be placed and a trench was cut by the contractor's diver.

This extra work was all performed at a reasonable price and resulted in making the railway more permanent and efficient in character.

Total cost of contract and extra work, $75,949.33.

It was considered necessary to apply a preservative to the exposed woodwork on the cradle of the railway; to back-fill behind the wing walls; to protect the south bulkhead wall by back-fill and an extension of the old wharf; to construct a storage shed; to purchase necessary blocking; load and unload the barge used and meet the other necessary expenditure for testing the railway, and to purchase a diving equipment and install telephone and electric lights for use in operation on the railway after completion.

The following allotments were made in connection with this work:

| | |
|---|---|
| Applying wood preservative | $ 450 |
| Protecting south bulkhead | 2,000 |
| Filling around track | 1,000 |
| Backfilling behind walls | 4,500 |
| To complete protection, south bulkhead | 1,000 |
| Diving outfit | 400 |
| Total amount appropriated | $9,350 |

The dredges *Red River* and *Winnipeg* performed the necessary dredging to provide for the off-shore track and for entrance to the railway.

A contract with the Town of Selkirk was entered into for the supply of electrical energy at a minimum rate of $1 per horse-power or $150 per month, and the sum of $145 was expended for power required for testing the railway.

### SELKIRK SLOUGH.

#### *Protection.*

During the flood of spring 1913, caused by ice jams below Selkirk in the Red river, the Dominion Government fleet of dredges, tugs, scows, etc., together with various steamers and tugs privately owned, were endangered by the rush of ice and water overflowing the banks of the Red river above Selkirk slough and pouring down through the slough. But for the fact that the Winnipeg, Selkirk and Lake Winnipeg Railway Company's bridge, which crosses the slough at its head, held up the greater portion of the ice, nothing could have saved the fleet of steamers and other craft wintering in the slough.

It was considered necessary to have a dam built across the slough to prevent a recurrence of flood and ice, and an amount sufficient was voted by Parliament at its last session.

Permission was granted the department by the Electric Railway Company to use its bridge as a core for the dam, as the bridge was in the most logical site for a dam.

Work was carried on from June 26 to July 13, and from August 18 to September 22, when it was finally completed.

The dam is composed of earth and gravel, the dump being 40 feet wide at its base, sloping to 12 feet at the top of the bridge. With this dam completed, no further trouble from flood damage is anticipated.

The expenditure incurred was $4,963.10.

Selkirk slough forms the winter harbour for nearly all the steamers on lake Winnipeg and the Red river. The Public Works shipyard is located near the head of the slough. The government dredging fleet winters at this yard.

The slough is narrow and the bottom and sides subject to erosion by the action of passing steamers, resulting in a deposit of mud being gathered in the deepest parts.

During the latter part of the season, departmental dredges *No. 202* and *204* were employed as follows:

*No. 202* worked from August 31 to September 9, September 24 to October 8 and October 31, removing 5,900 cubic yards clay, scow measurement, at a cost, including tug service, maintenance, and operation, of $1,097.06, equal to 18·5 cents per cubic yard. Two cuts were made of the following dimensions: 335 feet by 70 by 5 feet, and 270 feet by 60 by 2·4 feet. Depth at low water, 10 feet. Distance scows towed to dumping ground, 1¼ miles.

Dredge *No. 204* worked from September 22 to September 26 and September 29 to November 7, removing 18,840 cubic yards clay, scow measurement, at a cost including tug services, maintenance and operation, of $3,273.66, equal to 17·3 cents per cubic yard. The work consisted of one cut 709 feet long, 40 feet wide and 7 feet deep. Depth at low water, 10 feet. Distance scows towed to dumping ground, 1¼ miles.

All work done by both dredges was near the government shipyard, except a cut 335 feet long at a point half way to the mouth of the slough.

Summary:

| | |
|---|---|
| Dredge *No. 202*, 5,900 cubic yards at 18·5 cents | $1,097 06 |
| Dredge *No. 204*, 18,840 cubic yards at 17·3 cents | 3,273 66 |
| 24,740 cubic yards at 17·6 cents | $4,370 72 |

*Shipyard.*

Certain improvements necessary to increase the efficiency of the Selkirk shipyard, Selkirk county, and to facilitate repairs to dredging plant were made.

A boring bar for cylinders, a valve seating machine and band saw were installed and placed in operation. Four hydraulic jacks, blocks, sheaves, scow jacks, a duplex hoist and certain blocking and tackles were also added to the equipment.

A windmill was installed to provide better protection against fire and to give the necessary water service to the yard.

The total expenditure on these improvements was $1,954.97.

SNAKE ISLAND.

*Dredging at Hatchery.*

It was necessary to improve the south entrance, deepen the channel through the lagoon and enlarge the turning basin to accommodate a new steamer attending the fish hatchery. Dredge *No. 203*, with tug *Iona* and one dump scow, performed the work during the period between June 15 to July 27.

The material removed was clay, gravel and boulders. Material was scowed, and each scow had to be towed out of the lagoon to the south entrance where the tug took it to the dumping ground, adding greatly to the cost of yardage; this procedure was due to the extreme low stage of water in Lake Winnipegosis.

Quantities removed, are as follows:—

| | Cubic Yards. |
|---|---|
| South entrance | 2,322 |
| Channel through lagoon | 6,562 |
| Turning basin | 356 |
| Total | 9,240 |

This work cost $4,490.86, equal to 48·6 cents per cubic yard, which includes care and maintenance of the dredge.

Length of cuts, 2,048 feet, width 40 feet and average depth of cut 3·05 feet. Depth of water made 7 feet.

VICTORIA BEACH BAY.

An appropriation of $2,000 was made to complete the filling of the Victoria beach breakwater with stone. This breakwater, constructed in 1912, was not completely ballasted and it was found necessary to complete this work in order to prevent damage by seas and ice.

Work was begun on November 9, after the ice had formed and was completed and left in excellent condition, the expenditure being $1,856.25.

WARREN'S LANDING.

A survey and examination was made during the fall, of the channel at Warren's Landing at the north end of Lake Winnipeg.

It was found that rock ledges exist in places and that vessels frequently touch bottom. In a report, under date of October 21, it was recommended that the channel be improved.

The following is an estimate of the necessary work:—

Blasting granite 400 by 50 by 4 feet, blasting granite 50 by 50 by 7 feet, and blasting the top from a large rock in the channel. The total quantity of blasting will be about 4,000 cubic yards, which can be cast over.

It is difficult to make an estimate of cost, but for the first year's operations, the sum of $20,000 was recommended.

WINNIPEG.

An investigation was made into the necessity for wharfs and the best types for the City of Winnipeg, and it was recommanded that two pile wharfs be built.

The three sites, two in Winnipeg and one in St. Boniface, as recommended by the Harbour Commission, were considered and it was recommended that the site on Rover avenue at the foot of MacFarlane street be utilized. This was accordingly purchased at a cost of $100 per foot for 576·15 feet, or a total cost of $57,615.

The other sites recommended were at James and Pacific streets in Winnipeg and at the foot of Rue du Moulin in St. Boniface. After a careful consideration of these sites and their cost, together with the probable amount and value of the navigation involved, it was recommended that one wharf, located on that section of the Red river nearest to the corner of Portage avenue and Main street (which is considered the business centre of the city) in Winnipeg with easy access by bridge to St. Boniface, would well fill the requirements at the lowest cost. It was found that the site at the foot of Notre Dame avenue east, was most satisfactory in every respect, it being easy of access and so located that there is freedom from ice and currents. This property with a river frontage of about 400 feet is held by the owners at $140,000 but is under lease to the Canadian Northern Railway Company for a period of 35 years from the present date. The railway company have agreed to sub-let this property to the department for this period, for the sum of $20,000 cash.

It was found that a saving of about $6,000 would be effected by encroaching 13 feet on Rover avenue with the approach to the wharf at that place and the city of Winnipeg has agreed to allow this encroachment and an agreement to that effect has been prepared.

Contract plans and specifications for these two wharfs have been prepared approved by the Harbour Commission and forwarded to the department.

Extensive soundings were taken in connection with these wharfs and the harbour generally, and the question of dumping of material into the Red river by the city is now being taken up jointly by the city, the Harbour Commission and this department.

During the winter, the piles required for the city wharfs, were cut, by day labour, from timber limits K 20 and K 21 near Canyon, Ont. These limits are under lease by the Ontario Government to the George Sharpe estate, and as excellent camps and other facilities were available, it was decided that it would be to the department's advantage to pay the lessees a royalty of 3 cents per lineal foot for all piling cut and accepted and thus avoid the large expense entailed in the taking up of a new limit and the construction of camps and roads.

Over 50,000 lineal feet of piling was cut and 1,100 piles were delivered to the wharf sites at Winnipeg. One hundred piles were supplied to the Department of Marine and Fisheries for use at Selkirk and a sufficient number are now on hand to carry out other works in the district. The cost of this piling was less than 20 cents per foot delivered in Winnipeg.

The total expenditure to the end of the fiscal year is, as follows:—

| | |
|---|---|
| Rover Avenue site | $57,615 00 |
| Legal services | 167 04 |
| Printing and stationery | 77 29 |
| Preparing plans, making soundings and surveys of sites; cutting piles and delivering on sites | 10,631 52 |
| Total | $68,490 85 |

*Dredging.*

The Red and Assiniboine being silt-bearing rivers, the dredge cuts are constantly being filled with silt, more particularly during the spring freshets.

The Assiniboine discharges into the Red a few hundred yards above the Winnipeg basin. It carries much sediment and as the freshet occurs after that in the Red river has subsided, the deposit is lodged in the dredged cuts.

As it was necessary to dredge this year, departmental dredges *No. 204* and *No. 205* worked, as follows:

Dredge *No. 204* dredged May 20 to June 19 and June 22, removing 9,676 cubic yards, scow measurement, silt, sand and mud, at a cost of, including tug service, maintenance and operation, $1,930.29, equal to 20 cents per cubic yard.

The work done by this dredge was above Broadway bridge and between that bridge and the Canadian Northern Railway bridge. Average tow 1¼ miles; minimum depth of water, 10 feet.

Dredge *No. 205* worked from June 17 to July 16, July 20 to August 1, and August 8 to September 24, removing 51,190 cubic yards, scow measurement, silt, sand and mud at a cost including tug service, maintenance and operation, of $6,177.20, equal to 12 cents per cubic yard. The work done by this dredge was between Broadway and the National Transcontinental Railway bridges. Average tow, 1¼ miles; minimum depth of water, 10 feet.

The dimensions of cuts made by the two dredges are as follows:—

| | |
|---|---|
| 320 by 80 by 3·22 feet | 3,717 cubic yards. |
| 650 by 120 by 5·75 feet | 16,619 " |
| 265 by 40 by 8 feet | 3,127 " |
| 1,250 by 80 by 7·43 feet | 27,509 " |
| 835 by 40 by 8 feet | 9,894 " |
| Total dredged | 60,866 " |

The amount removed by each dredge was as follows:

| | | | | |
|---|---|---|---|---|
| Dredge *No. 204,* | 9,676 | cubic yards | at 20 cents. . . . . | $1,986 01 |
| " *No. 205,* | 51,190 | " " | at 12 " . . . . . | 6,177 20 |
| Totals | 60,866 | " " | at 13 cents. . . . . | $8,163 21 |

WINNIPEG BEACH.

*Dredging.*

Departmental dredge *No. 204* worked June 23 and 24, and from July 18 to August 1, extending and improving the approach channel to the harbour of refuge and berths on the south side of the breakwater.

The dimensions of the cuts were 320 feet by 7·3 feet, equal to 4,484 cubic yards, scow measurement, gravel and boulders. The cost of this work, including tug service, maintenance and operation, was $818.42, equal to 18·2 cents per cubic yard. Average tow one mile. Minimum depth of water 7½ feet below zero of water gauge.

WINNIPEGOSIS.

A survey, with soundings, covering approach to channel and in the Mossy river at Winnipegosis, was made in December last to determine amount of silting up of the entrance channel, which at the present time is in bad shape owing to the dredging plant being unable to devote its whole time to keeping the channel clear of silt. This condition is accentuated by the extreme low elevation of Lake Winnipegosis during the past season. The average elevation of the lake has been at zero, and many times it was a foot below zero of the gauge. It has been deemed necessary to lower the zero to 827·86 which elevation has been that of the hydrographic survey of Canada. Future dredging at this basis will give the channel sufficient depth for present shipping requirements as it is presumed the lake will not go any lower than this elevation, which is the lowest in thirty years.

The dredging plant is being renewed by a new dipper dredge, new tug and an extra dump scow, which plant will have no difficulty in keeping the various works on the lake in good shape.

*Dredging Entrance Mossy River.*

During the season, departmental dredge *No. 203* worked dredging the entrance from Lake Winnipegosis to the Mossy river, Dauphin county, and making improvements inside the mouth of the river, as follows: May 22 to June 13 and July 28 to September 30.

The quantity removed was 16,408 cubic yards sand, clay and hardpan, scow measurement, at a cost of $4,097.85, equal to 24·9 cents per cubic yard; this cost includes care and maintenance of the dredge.

Length of cuts 2,674 feet, width 40 feet and average depth of cut 4·15 feet. Average tow 1½ miles. Depth of water made 8 feet. Of the above quantity, 11,078 cubic yards were dredged from the entrance channel in the lake and 5,330 cubic yards from the river inside the mouth.

Considerable delay was occasioned by dredge being attended by only one dump scow.

The tug *Iona* was hired at $7.50 per day and insurance.

WINNIPEG RIVER.

An investigation was made into the effect on navigation of the water power developments as proposed in the Winnipeg river between Lac du Bonnet and Lake Winnipeg.

It was found that the Pine Falls, Grand du Bonnet and McArthur Falls developments would, taken singly or as a whole, aid present local navigation, and would be of benefit to any future navigation that might be local or through in character. The locks, as proposed to be built if required, would make possible the navigation of the whole river. Hence it was recommended that these plans be approved in so far as the requirements of navigation are concerned.

## SASKATCHEWAN.

### CARROT RIVER.

Upon representations by the Hudson's Bay Company and navigation interests at Le Pas, the matter of navigation in the Carrot river received attention. The river had been blocked by ties of the Hudson's Bay Construction Company on the west side, while the Finger Lumber Company held their rafts in booms next the east bank under lease from the Government, covering a distance of some 6 miles from the mouth. Prompt removal of the ties was insisted upon, and was effected July 25. The booms also were cleared about that date.

A jam of driftwood about 10 miles above the mouth settlement of Red Earth and 110 miles above the mouth of the Carrot river has been the subject of considerable correspondence. The removal of this jam was finally authorized, and the jam was completely destroyed, being blown up and afterwards burned.

Expenditure to March 31, 1915, $734.75.

### CRAVEN DAM.

The extension of the fish ladder and the closing of small leaks which appeared in the dam were attended to during the season.

In its present condition, the dam is considered safe to withstand the spring freshets in the Qu'Appelle river, and has proven effective in maintaining the level in Last Mountain lake.

Expenditure to March 31, 1915, $163.05.

### CUMBERLAND LAKE.

A request having been made to dredge a channel from the mouth of the Big Stone river to deep water in Cumberland lake, Prince Albert county, to enable steamboats to navigate across the easterly end of the lake, from which point the recently discovered goldfields at Beaver lake can be reached, a survey of this part of the lake was made in July, 1913, and the dredging of a channel 100 feet wide and 8 feet deep and extending out into the lake 8,600 feet was recommended, necessitating the removal of 50,000 cubic yards of clay. Instructions were given June 23, 1914, to put dredge *No. 208* at work on this channel when the dredging at Le Pas on which the plant was engaged had been completed. The fleet left Le Pas July 8, for Cumberland House 87 miles up the Saskatchewan river and reached its destination July 15, but work was not started until July 30, when the dredge began at the mouth of the Big Stone river on the eastern side of the proposed channel and worked northerly about 2,275 feet making a cut 25 feet wide and removing 14,306 cubic yards of hard clay *in situ;* of this quantity 12,626 cubic yards, were cast over, the balance, 1,680 cubic yards, was towed 1¼ miles. The cost of the work was $5,714.39½ or 39·9 cents per cubic yard. Dredging operations ceased for the season on October 10, when the dredge was brought back into Big Stone river, and after dredging a berth for the plant, was put into winter quarters in charge of a caretaker.

LAST MOUNTAIN LAKE.

A survey on the ice and soundings of the channel and turning basin at Valeport in Last Mountain lake made in March, 1914, showed that the width and depth had been maintained. The usual spring repairs were made to the dredging fleet and on July 6, the crew having been engaged, departmental dredge *No. 207* with tug *Ruby* and two scows began dredging a strip 75 feet wide and 900 feet long on the west side of the turning basin at Valeport, and was engaged on the work during the entire season. The turning basin is now 200 feet wide, 900 feet long and 6 feet deep at low water. This is ample to enable steamers to turn without danger of grounding. The location of the turning basin is at the southern end of the channel at Valeport. The dredging which began in 1910 was continued each successive year. The number of cubic yards removed each year is as follows:—

| | | | |
|---|---|---|---|
| In 1910, | 30,436 | cubic | yards. |
| " 1911, | 21,072 | " | " |
| " 1912, | 18,127 | " | " |
| " 1913, | 19,967 | " | " |
| " 1914, | 9,763 | " | " |
| | 99,365 | " | " |

Of the above amount, 9,763 cubic yards of clay and gravel were dredged in 1914 at a cost of $6,274.14 or 64·2 cents per cubic yard. The high cost was owing to dredge vessel repairs. The material was towed 1½ miles and the expansion factor would be about 25 per cent.

The work which is now completed consists of a channel 4,700 feet long and 65 feet wide and a turning basin 900 feet long and 200 feet wide, both dredged to a depth of 6 feet at low water.

Operations were suspended for the season on October 15, and instructions were sent to the district engineer at Winnipeg, after the close of the season's work, to remove the dredge to Winnipegosis.

NORTH SASKATCHEWAN RIVER.

*Survey.*

Three survey parties were put in the field last season. A party of 25 men, in charge of P. H. Smith, C.E., was engaged on the survey of the river, east of Le Pas; a small contour party of six men in charge of G. P. Morse, C.E., was put to work in the Cadotte, Nipawin and Tobin rapids below Prince Albert, and a party of six men in charge of A. M. Kirkpatrick, hydraulic engineer, was detailed to measure the discharges of the principal tributaries of the Saskatchewan river in the foot hills in connection with storage reservoirs for flood regulation. A brief outline of the work done by each of these parties follows:—

*Transit, Level and Sounding Party.*

This party assembled at Le Pas on May 12, proceded down river to a point about 29 miles below, when the season's work was started. The survey of the river from Le Pas down to this point was made during the latter part of the season of 1913.

From this point to Cedar lake, a distance of approximately 42 miles, the river flows through a low, flat, marshy country dividing into several channels forming islands from 4 to 6 miles wide in places. These channels discharge into the main river a few miles above Cedar lake.

In general, the banks of the river were about 3 feet above high water where the season's work started and gradually became lower until a few miles above Cedar

lake they were less than a foot above mean high water and in seasons of extreme high water have been known to be covered. The banks are wooded with poplar and willow, and for 12 miles above Cedar lake mostly willow. This bush forms only a fringe a few hundred feet wide along the river; beyond this fringe lie meadows, sloughs and shallow lakes. The first rock was observed at a point about 39 miles below Le Pas and consists of limestone in ledge formation. It outcrops at intervals between this point and Cedar lake.

A triangulation survey was made from mile 29 below Le Pas to Cedar lake. The main channel only was covered in this way. Stadia surveys were made of the other principal channels, the smaller ones being neglected. Soundings were taken of all the channels covered by triangulation and stadia surveys. A double line of levels were run from mile 29 below Le Pas to Cedar lake and connected with the levels of the Topographical Surveys branch, Department of the Interior, at the point where the 14th base line crosses the river. Bench marks were established at intervals of approximately one mile along the river. The triangulation survey was also tied in with the 14th base line.

The season was very favourable between the middle of May and the middle of July when the party reached Cedar lake, only 1½ days were lost on account of rain. The river was also low, this being a very favourable feature.

The triangulation survey was discontinued at the entrance of the Saskatchewan river into Cedar lake. From this point, a traverse survey of the south shore of Cedar lake was made and continued east for a distance of 61 miles or as far as the entrance to Napanee bay. A traverse was also made of Collins island, 7 miles, and for a distance of 8 miles along the north shore around Rabbit point, the total length of traverse surveys made being 76 miles. The traverses of the north shore, Collins island and the south shore were connected by triangulation. Ties were made with the 13th base line on the west shore of Cedar lake and Rabbit point. The method of running the above traverses was as follows:—

A continuous chainage was carried along from the starting point, the first transitman read each angle twice, the lower plate of the transit for the second reading being set in a position approximately 90 degrees different from the first reading; as both veriners were read in each case, this gave four readings for each angle, the means of which was taken. A second set of chainmen and transitmen followed: the distance in this case was measured from hub to hub only and the transitmen in this case doubled the angles. If any serious discrepancy was found between the two sets, the work was rechecked. Details were filled in by stadia surveys.

Soundings were taken in Cedar lake for a distance of 2 or 3 miles from the entrance of the Saskatchewan river and were started again between Collins island and Rabbit point.

No soundings were taken in the wide part of the lake, the minimum depth of water being from 10 to 12 feet, where soundings were discontinued, this depth increasing in the direction of Rabbit point.

The double line of levels was continued for the full length of the south shore traverse, and bench marks established at intervals of approximately one mile as before.

The season being dry and the lake at a low stage, good progress was made under these favourable conditions. The only drawback was the wind, which was responsible for some loss of time during the latter part of the season. During the last two weeks, great difficulty was experienced in taking soundings owing to the smoky condition of the atmosphere caused by forest fires along the east end of the lake. The fall was very mild, there being practically no frost up to the time the field work closed down for the season on October 8.

The work remaining to be done to complete the survey of the Saskatchewan river to Lake Winnipeg consists of the survey of the remaining part of Cedar lake, Cross lake, and of the Saskatchewan river below Cross lake, where the Grand rapids occur.

The distance to be covered is approximately 76 miles. Owing to the difficult nature of the country and to the large number of soundings to be taken, this work will require another season to complete.

*Contour Party.*

Surveys having in view the possible improvement of the river at the Cadotte, Nipawin series of rapids, and at the Tobin and Squaw rapids, by means of locks and dams, were made by the above party during the latter part of the season.

Contours at 8-foot intervals were carried over a distance of 11 miles of river in the first-named series of rapids, or from mileage 95 to mileage 106, below Prince Albert, and over an equal distance in the Tobin-Squaw rapids, or from mile 152 to mile 163.

These surveys show that in case it should be advisable to overcome the above named rapids by means of locks and dams, the development of a large amount of hydro-electric power is feasible in connection with such improvements, while as power projects alone they would be over expensive and unadvisable at the present time, owing to their distances from possible markets, Le Pas and the City of Saskatoon being about 100 miles and 200 miles distant respectively. No other considerable markets more readily accessible are likely to exist for a number of years to come.

*Hydraulic Party.*

The party was organized at Rocky Mountain house early in June. A pack train of 10 horses was used in travelling over the country covered by the season's work. Discharge measurements of the following streams were made and possible dam sites noted for further examination:

| River or Creek. | Place. | No. of Measurements. | Dates. |
|---|---|---|---|
| Clearwater river | Rocky Mountain house | 3 | June 24th.<br>August 8th.<br>October 10th. |
| Saskatchewan river | " " " | 6 | June 25th.<br>August 7th.<br>October 9th. |
| " " | The Gap | | September 2nd.<br>September 28th. |
| " " | Above the Siffleur | | September 17th. |
| Baptiste river | At mouth | 2 | July 4th.<br>August 1st. |
| Brazeau river | " | 3 | July 18th. |
| " " | Above the Nordegg | | July 24th. |
| " " | Below " " | | July 25th. |
| Nordegg river | At mouth | 2 | July 22nd.<br>July 27th. |
| Rain or Sheep river | " | 2 | August 24th.<br>October 6th. |
| Bighorn creek | " | 2 | September 7th.<br>September 22nd. |
| Cline or White Goat river | " | 2 | September 14th.<br>September 20th. |
| Siffleur river | " | 1 | September 16th. |
| Whiterabbit creek | " | 1 | September 18th. |
| Mire creek | " | 1 | September 30th. |

Total measurements, 25.

Discharges have been calculated and results will be used in the preparation of discharge curves, these, however, cannot be platted at present, the information on hand being insufficient. It is proposed to continue this work next season in connection with the examination of possible dam sites for flood control purposes.

*Gauges.*

Daily readings of water gauges were recorded at the following stations during the past season: Edmonton, Battleford, Prince Albert, Le Pas and Cedar lake.

*Office Staff.*

During the winter, the office staff was employed in working up the notes of the season's labours in the field. A very large amount of calculations was required in connection with this work.

Office plans on a scale of 500 feet to an inch covering surveys made during the past season, are now well advanced and are expected to be completed in a few weeks' time.

A profile of the channel in the stretch of river platted on each plan was also prepared and is shown on each sheet.

Pantagraph reductions of 58 office sheets, 10 feet long each, covering the river from Edmonton to Le Pas, were made. Reduced maps on a scale of 2,000 feet to an inch will accompany final report of this survey. It is proposed to prepare these maps for photo-lithography; should the department wish to publish a set of charts of the North Saskatchewan river at some future date, these originals will be available for the purpose.

PRINCE ALBERT.

The works started in 1913 for the protection of the bank of the Saskatchewan river, along the city park on River street, Prince Albert, Prince Albert county, were continued during the years 1914-15. These works were extended 940 feet making a total length of 1,687 feet completed to date. There still remains a section of about 504 feet to build in order to reach the Canadian Northern Railway bridge where the work ends.

Pile driving started June 16 and continued August 19, 1,450 piles were driven, capped and braced. Brush and stone were placed outside and inside the piling completing the section of 1,687 as called for by the plan. This work was done to advantage on the ice during the winter months. The following material was purchased in March to enable the work to be continued on the opening of navigation:—

Five hundred piles 24 feet long and 12,512 feet b.m. for braces.

Expenditure to March 31, 1915, $18,354.56.

QU'APPELLE RIVER.

The new floating derrick known as departmental dredge *No. 209* was fitted in the early spring for the purpose of removing weeds and cutting a channel in the Qu'Appelle river, Qu'Appelle county, between Echo and Mission lakes at Fort Qu'Appelle, Saskatchewan. This work was necessary to establish communication between the lakes for power boats.

Dredging began at Fort Qu'Appelle on May 8, cutting a channel 25 feet wide in the river from the highway bridge to deep water in Echo lake. After completing this work, the dredge was put to work below the highway bridge and dredged a channel down the Qu'Appelle river for a distance of 4,800 feet, the depth made being 3 feet at low water; a mass of weeds that hindered navigation was removed together with 9,899 cubic yards *in situ* of quick sand, gravel and clay at a cost of $2,425.58 or 24½ cents per cubic yard. All the material was cast over.

Dredging operations ceased on September 24, the work having been completed, and on instructions from the Department the dredge was dismantled and shipped to Kenora, Ontario.

## ALBERTA.

EDMONTON.

This wharf is located immediately east of the Government low-level bridge in the City of Edmonton. The wharf as built, has a total length of 180 feet along the back and 121 along the front, with a breadth of 60 feet. The design also called for two levels, the upper one being 11½ feet above the extreme low water mark, and the lower one 7½ above the same datum. The original contract called for the construction of a wharf alone, but it did not, however, provide for any filling back of the wharf, which was required in order to give access to the wharf for teams and pedestrians. This work has been done by the department. We also have sheet-piled the whole back of the wharf as well as the front, in order to prevent ice cakes from injuring the piling in the spring. The work during the fiscal year just closed, consisted in grading the roadway from the McDougall bridge and in rolling the roadway and pressing 6 inches of screened gravel. In doing this work, due provision was made for draining off the surface water by giving the roadway proper crowning and putting in side-ditches. There are 202 cubic yards of gravel placed on this roadway. We also constructed a suitable 2-inch sidewalk of fir plank which provides a ready means of access for pedestrians to the wharf.

Considerable draining work was done in connection with this roadway; the river bank at this point being cut down considerably and the bank surfaced to provide for the roadway. In November last, it was considered advisable to put in a stone drain back of the low-level section of the wharf as the water was affecting the material at that place, and causing a small movement of the wharf. This movement consisted in the surface of the wharf warping for several inches vertically. This stone drain was put in along the back of the low-level section as mentioned and an outlet from there to the water's edge, a total distance of 120 feet. The excavation for this drain was carried down as near to the water's edge as possible then filled with boulders, grading same from a large size at the bottom to almost gravel at the top. This has resulted in taking off all the water which was previously forming as it were a sump-hole back of the wharf, and thereby with earth pressure, causing the damage mentioned.

There has been expended the sum of $2,720.52.

### *Bank Protection.*

This sliding bank comprises that portion of the north bank of the North Saskatchewan river lying east of McDougall avenue bridge. Most of the property affected by the movement belongs to the City of Edmonton, and is held by them as park property, although the land was not improved in any way.

Some two or three years ago, the city had a number of surface drains dug through this property for the purpose of draining off a number of springs which exist on the sliding bank. The water from these spring finds its natural outlet through the soil, and being very porous, it has gradually worn away the bank by underground erosion. The surface water also played its part in helping this work. Some of the drains put in by the city had not properly done the work they were designed to do, and some of the holes containing water, or which would contain water during the rainy season, were not drained by any method.

During the month and a half engaged in this drainage work, we have put in ditches and drained all the springs located on the city property affected by the sliding movement. We have also drained practically all the pot-holes where water would collect during rainy weather. In many cases the slope of the ground was too abrupt to permit of ditches being excavated in the ground, and we resorted to the use of galvanized piping and wooden sluices. These ditches, will, we think, drain the largest

part of the water falling on this bank as well as drain off the springs existing thereon. We further believe that these drains will do a great deal of good towards accomplishing the purpose they were designed for, that is, in keeping the bank from further movement by reducing the action of water upon the soil and underground strata.

LESSER SLAVE LAKE.

*Dredging.*

The object of this work is to provide a navigable waterway from deep water in the Lesser Slave lake to the Village of Grouard.

The width of the channel as already excavated, varies from 35 to 40 feet. The depth is 4½ feet approximately at low water. This channel as excavated extends from deep water in the lake, terminating at Grouard.

*Condition of Work, etc.*

When this work was first laid out in 1911 it was proposed to make a channel having a bottom width of 50 feet on tangent and 60 feet on curves with a depth of 4½ feet at low water. In view of the coming of a railway into this country, navigation does not now play as important a part as it did in past years, and I believe that a channel having the width already dug, would be sufficient for present and future needs. In order to finish the channel, we propose to continue the excavation from the end of the present cut to the vicinity of the government bridge, making a turning basin there sufficiently large for craft using the lake. This work should be accomplished this summer and the dredge then be taken off this work

The nature of material removed has been largely stiff clay or gumbo, so-called. There are, however, several sand and gravel bars at the east end of the channel which have been excavated. Sand, gravel, and clay, therefore, comprise the material excavated on this work.

The quantity of material removed during the past fiscal year, place measurement, consisted of 19,539 cubic yards, and was done by the departmental plant, under day labour. The total expenditure during the past fiscal year was $6,322.14.

The plant commenced operations on June 8 and suspended for season October 19.

STURGEON RIVER.

Improvements carried out during the past fiscal year consisted in dragging weeds out of Lake Ste. Anne, near the point where the same drains into Sturgeon river, and in clearing log jams and Devils lake. Considerable work was also done from the Sturgeon river east of Devils lake.

In Lake Ste. Anne the work consisted largely of clearing the outlet of the lake of weeds and bulrushes, which had grown across the outlet and seriously retarded the flow of water. A sand bar in the lake was blasted, thereby further helping the flow into the river. After this work was done, the boat proceeded down the river, clearing out the channel by removing weeds where necessary, also removing log jams which in some places were large. After reaching Devils lake the boat proceeded down the Sturgeon river east of the lake and cleared the river out for some miles. This had the effect of increasing the flow out of Devils lake, thereby lowering the lake and improving a large amount of hayland which was affected by the elevation of water in the lake and in the river east and west of the lake.

Work was started on May 18 last, and discontinued for the season on October 24.

In the removal of weeds and other growths, a launch was used with a weed cutting device attached to the stern. This launch, as mentioned in the annual report for the fiscal year 1913-14, was brought from Athabaska, where it had been in a state of disuse for several years, and repaired sufficiently to be used in the work.

There was expended during the past fiscal year the sum of $4,875.39.

## BRITISH COLUMBIA.

### AINSWORTH.

Ainsworth is a town situated on the west side of Kootenay lake, 29 miles from Nelson.

It is the headquarters of a prosperous mining settlement, the principal metals mined being silver and lead, the ores carrying small values in gold also. Most of the ore is milled at Ainsworth, to which it is brought from the mines by aerial tramways and the concentrates are then shipped in cars on barges to the smelters. Some of the richer ore is shipped direct to the smelters. The mining industry at this place ordinarily supports a population of about 500.

During the fiscal year 1912-13, authority was granted for the construction of a wharf to replace the old wharf built by private subscription, assisted by the Provincial Government, about 25 years ago. On March 18, 1914, a contract was let to J. Dancy & Co., of Nelson, for the construction of a concrete wharf. Work was at once begun, but had to cease on May 10, on account of rising water; was resumed on October 3, and completed on November 31, 1914.

The wharf has a width of 30 feet and a total length of 236 feet, of which the upper 20 feet are level, 192 feet are on a grade of 1 in 12 and the lower 24 feet are level and at a height of 4 feet above low water level. The amount of the contract was $9,242 and an extra sum of $750 was paid for additional concrete required on account of faults in the rock causing a large overbreakage, making the total cost of the work $10,721.84.

### ALICE ARM.

The construction of a landing float for small boats was authorized and an appropriation of $250 granted. The float was constructed at Prince Rupert and towed to Alice Arm. The total cost of this work amounted to $213.69.

### ALLANDALE.

Allandale is a small farming and fruit growing settlement on the east side of the Columbia river, about 7 miles above East Robson.

During the season 1914-15, authority was granted for the construction of a wharf, and the work was commenced on November 10, and completed on November 30, 1914, and in January, 1915, a shed 8 by 12 feet was built on the wharf; the total cost of the wharf and shed being $488.53.

The wharf is a float 20 feet by 30 feet, with an approach 8 feet by 12 feet, and is held in place and moved up and down the beach as the water rises and falls by means of half-inch wire cables.

### ANNIEVILLE BAR.

A natural widening of the river, at a point just west of the City of New Westminster and below the fork forming the main and north arm branches of the Fraser, is artificially contracted by means of three wing dams projecting into the river from either bank. In the intervals of September 21 to December 5, and February 8 to March 31, the departmental plant was engaged in carrying out extensive repairs to and in strengthening existing works. Large quantities of brush and some 3,000 tons of rock were added to the wing dams to prevent erosion of the foundations and to forestall damage from summer floods.

This work was performed by day labour at a cost of approximately $6,780.36.

Bindleys Landing, B.C.

ARROWHEAD.

"The Back Channel" of the Columbia river at Arrowhead has been cleared of snags and other obstructions for the purpose of allowing the dredging of this channel so as to form a low water channel into which the floating ice coming down the river during the winter and spring months can be diverted and wasted out into the Upper and Lower Arrow lakes, instead of, as at present, lodging against the wharf at Arrowhead and forming a very serious obstruction to navigation during the winter and early spring months. When the proposed dredging is completed, it is anticipated that serious ice troubles at Arrowhead will cease.

Work was begun December 21, 1914, and completed February 4, 1915, at a total cost of $857.45.

BANKS ISLAND.

An examination was made for a wharf at the north end of Banks island, a small island about fifty miles off the west coast of British Columbia, from Prince Rupert. An examination was made which developed the fact that a floating dock would be of more advantage than the usual pile wharf. A report to this effect was sent to Ottawa and an appropriation of $2,650 was asked for this purpose.

BARNSTON ISLAND.

Repairs were made between June 24 and 29, by placing 16 new piles, planks and chocks, at a cost of $315.70.

BEAR RIVER.

This work consisted of the construction of a float 100 by 30 feet with an approach 40 by 6 feet. The work commenced on September 21, and was completed October 28, 1914. The amount expended was $990.

BEATON.

Repairs were made to approach and hand rail along wharf at a cost of $124.48.

BELLA BELLA.

Instructions were received to report on the advisability of the department taking over and repairing the wharf belonging to Mr. J. A. Pauline, who agreed to surrender his interest in the wharf to the department and give a free right-of-way over his land for an approach.

It was recommended that this proposition be accepted and an appropriation of $7,300 was asked for to complete the work.

BELLA COOLA.

Bella Coola river having become jammed by drift wood is gradually cutting away the Indian reserve at this point. A report on the condition was asked for and made, and an appropriation of $13,000 was asked for to remove the obstructions and prevent future recurrence.

BINDLEYS LANDING.

Bindleys Landing is a summer resort situated on the southerly side of Bowen island, Howe sound, some 18 miles from Vancouver city. There is a post office, store and hotel, and a provincial government road affords access to the landing for cottagers and farmers living in the vicinity. Two steamers in the summer and one in the winter make Bindleys a daily point of call.

Authority being granted for the construction of a wharf, an agreement was entered into with James McDonald & Company to perform the work at unit prices of $22 and

$15 each respectively for hardwood and fir piles, and $30 per M. for timber, both in place. The hardwood piles were delivered to the contractors at New Westminster.

Work was started on July 11 and completed on August 4, at a total expenditure of $3,994.36.

The completed work consists of a pile bent and timber decking approach 240 by 14 feet and pier-head 40 by 60 feet, together with a small boat float 18 by 32 feet. A storehouse 10 by 18 feet and the usual gangway and slip were provided.

BLIND BAY.

The Blind bay wharf was built by day labour and consists of a pile bent and timber decking structure, a level approach 27½ feet by 18¾ feet, a level platform 28 feet by 32 feet provided with a 12-foot by 20-foot shelter shed and an incline 108 feet long by 32 feet wide on a slope of 1 in 12, falling from deck level of the approach and platform to 2 feet above low water level.

Work was commenced on October 14 and completed on December 4. An expenditure of $3,499.97 was incurred on this service.

BURTON.

Repairs were made to fender piles and new dolphins of wharf at a cost of $569.85.

*Dredging.*

At the foot of the swift water, below Burton, are numerous sand bars, which render navigation extremely difficult at low water stage. With the object of creating a channel navigable by steamboats at all stages of water, the departmental dredge *Sheldrake* began operations on February 2, and completed the cut on March 1, 1915. During this time, a channel 1,795 feet long and 75 feet wide, with a minimum depth of 8 feet at low water, was excavated. The material moved and overcast, chiefly sand, amounted to 13,130 cubic yards, place measurement, with an expansion factor of 15 per cent, or 15,100 cubic yards, scow measurement, at a cost of $1,377.51.

Below rock slide the channel of the Columbia river, near its outlet into the Lower Arrow lake, is extremely shallow at the low water stage, due to the existence of numerous bars deposited during high water season. On March 1, 1915, the departmental dredge *Sheldrake* began operations and completed the cut on March 15, 1915. During this time, a channel 1,200 feet long and 75 feet wide, with a minimum depth of 8 feet at low water, was excavated. The material moved and overcast, chiefly sand, amounted to 8,350 cubic yards, place measurement, with an expansion factor of 15 per cent, or 9,650 cubic yards, scow measurement, at a cost of $709.39.

CANOE CREEK.

An allotment of $2,500 was authorized for this service to complete the work carried over from last fiscal year, and the work was completed on April 16. The total expenditure for the present fiscal year is $1,961.47.

CEDAR CREEK.

*Dredging.*

Cedar creek, on the west side of Kootenay lake, one mile north of Ainsworth, is the tramway terminus for a number of mines operated by the Consolidated Mining and Smelting Company and the Silver Hoard Mining Company.

These companies have extensive ore bunkers at Cedar creek, and owing to the fact that material slipped from the surrounding banks into the channel, dredging was necessary to enable barges to be berthed alongside the ore pockets.

During the season 1913-14, the dredge *Bittern* operated at this point and 8,546 cubic yards of material were moved, mostly rocks and clay. As the cribbing at this point had not been completed, further slipping of the banks took place, and on April 22, 1914, the departmental dredge *Bittern* began operations, completing the cut on April 28, 1914. Two cuts were made, 154 feet and 102 feet in length respectively, with a width of 50 feet and an average depth of 6 feet and 5 feet at low water. The material moved and overcast, mostly sand and gravel, amounted to 320 cubic yards, scow measurement, at a cost of $168.42.

This work gives a permanent channel on either side of the ore bunkers, and enables barges to be moored at such during any stage of water.

### CHEMAINUS.

The above work consisted of the construction of a float 20 by 30 feet, gangway 36 by 6 feet and an approach 182 by 6 feet. The work was commenced October 7 and was completed October 31, 1914.

The amount expended was $597.45.

### CHEMAINUS RIVER.

The above work consisted of removal of a log jam, which was causing an obstruction in the Chemainus river. The work was commenced August 3 and was completed October 31, 1914. Subsequently a further obstruction was caused by some trees falling into the river. The work of removing these was commenced February 15 and completed February 20, 1915.

The amount expended was $1,494.61.

### CHILLIWACK.

At different times throughout the year, repairs and additions were made to the government wharf at Chilliwack on the Fraser.

The repairs consisted in redecking portions of the wharf and replacing bearing timbers which had rotted. A corral was also built to facilitate the handling of live stock shipped in and out. The total cost was $764.35.

During low water periods on the Fraser, it is impossible for the river boats to get up to Chilliwack. To meet this condition, a landing 2 miles further down the river is used, and freight is landed there and taken to Chilliwack in wagons. Work at this landing consisted of a new slip 75 by 8 feet, a new shed 24 by 40, and a shelter for live stock 12 by 40 feet, which were built at different periods throughout the fiscal year, at a total cost of $227.70.

### COBURN'S BAR.

*South Thompson River.*

On October 17, the dredge was towed to Shuswap and on the 22nd work was commenced in the cut which was completed on December 31, and the finished dimensions, by survey, were: length, 1,456 feet; width, 45 feet; average depth of face removed 3·53 feet. Digging was carried to a sub-grade 6·5 feet below low water, giving a clear 5 feet of depth. The total number of cubic yards of clay, sand and hardpan, was 8,624 in addition to 75 cubic yards which slid back into the cut and were re-overcast at a later date (January 18), all at a cost of $2,346.02 or 26·96 cents per cubic yard nearly. On January 2, work was commenced in another cut which is 404 feet long by 45 feet wide with an average depth of face removed of 3·05 feet. The

total number of cubic yards of clay handled was 2,062 at a cost of $343.51, work being completed on January 16. The cost per yard was 16·65 cents nearly, and the bottom was removed to a sub-grade of 6½ feet below low water giving a clear 5 feet of depth. Two other cuts were made to remove the old dumps from earlier cuts with which the openings in the new provincial road bridge did not align. One cut is 656 feet long by 45 feet wide with an average depth of face removed of 4·8 feet, 5,185 cubic yards being overcast and 200 cubic yards, which slid back into the cut, re-overcast at a total cost of $778.32 or 14·45 cents per yard nearly. The bottom was removed to 4½ feet below low water, giving 4 feet of depth at that stage. On February 19, the dredge was lined back to the other cut and work was commenced on the 22nd and completed on March 5. The dimensions were, length 420 feet, width 45 feet, average depth of face removed 2·7 feet, 1,884 cubic yards of clay and sand were overcast at a cost of $385.34 or 20·45 cents per cubic yard nearly. Bottom was removed to a sub-grade of 5 feet below low water giving a clear 4 feet of depth at that stage. The dredge then lined back to a cut which was completed between March 8 and 20, actual digging dates; the dimensions by survey, were: length, 372 feet; width, 45 feet; average depth of face removed 3·9 feet. Bottom was dredged to a sub-grade of 5 feet to provide a clear depth of 4 feet at low water, the yardage being 2,441 at a cost of $446.30 or 18·28 cents per yard nearly. The dredge was on the 21st lined back where by March 31 a cut was made 268 feet long by 45 feet wide with an average depth of face removed of 3 feet, 1,340 cubic yards of clay and gravel were overcast at a cost of $327.39 or 24·43 cents per yard nearly. To finish this cut, an additional 205 feet remain to be dredged.

COLUMBIA RIVER.

The portion of the Columbia river lying between Windermere lake and the town of Golden, on the main line of the Canadian Pacific railway, a distance of 100 miles, is navigable for light draft steamers from April until November. The snagboat *Muskrat* is engaged on this part of the river, doing necessary work to remove obstructions and keep the river navigable.

She started work for the season of 1914 on March 16, and worked until October 3, when she was laid up for the winter.

The season's work consisted of the following:—

Overhauling plant and fitting scow for snagging.

Clearing channel of snags from Red Rock to Windermere lake, 35 miles.

Clearing channel of snags from Windermere lake to Columbia lake, 9 miles.

Putting in one bent of dam across mouth of Horsethief slough and strengthening dam with brush and 135 cubic yards of rock.

Scraping weeds out of channel one mile below Athalmer, for a distance of 300 yards.

Scraping mud from south side of wharf at Windermere.

Driving 70 guide piles along the sharp bend in channel above Athalmer swing bridge.

Clearing sweepers and cutting leaning trees and brush off banks between Golden and Athalmer, two trips being made during season.

The total cost of the season's work, was $4,847.26.

*Arrow Lakes.*

The portion of the Columbia river which connects the Upper and Lower Arrow lakes, is known as the narrows, and is about 20 miles in length. During the past year, 1914-15, the departmental dredge *Sheldrake* was employed during a portion of the season in dredging the various bars and shallows to keep year round navigation in the narrows.

COMOX.

This work consisted of the enlargement of the wharf and float; general repairs to existing wharf, float and approach; the construction of two new slips; raising 160 feet of the approach to conform with new grade of road, and moving of freight shed. About half the piles used in the above work are creosoted. The work commenced November 25, 1914, and was completed January 9, 1915. The amount was $5,980.

COURTNEY RIVER.

*Dredging.*

The object of the dredging carried out below the mouth of the Courtney river during the past season was for the purpose of improving and straightening the channel across the tidal flats thereto, with the object of enabling small steamers of about 100 tons burden to get up the river at about half tide. The originally proposed scheme was to dredge a new channel across the tidal flats 8,600 feet long by 60 wide (previously intended to be 150 feet wide) with an additional channel 420 feet long by 300 wide. The above scheme was amended to provide an approximately straight channel from the mouth of the Courtney river to Comox bay by means of a dredged channel 2,400 feet long by 60 wide.

It was not found feasible to carry out shallow dredging during high tide as originally intended, the channel dredged being taken to a depth of about 8 feet at low water in order to provide flotation, at all stages of the tide, for the dredge when working. For mechanical reasons it was also found necessary to increase the width of the channel to 100 feet. The work was carried out by the departmental hydraulic dredge *King Edward*, which worked from August 18 to October 12, 1914, dredging a channel 2,806 feet long and 100 feet wide, giving a depth of about 8 feet at low tide, 128,900 cubic yards of gravel and silt being removed.

Owing to the recent formation of a bar above the dredged channel, it will be necessary to carry out further dredging towards the mouth of the Courtney river.

The cost to the department for the above work was $7,812.43, being at the rate of 60·6 cents per cubic yard.

COWICHAN RIVER.

A survey of the Cowichan river was commenced on March 21, 1914, and was completed April 16, 1914, in order to obtain information regarding the feasibility of providing a navigable waterway from Cowichan bay to the city of Duncans.

The amount expended was $330.55.

CRAWFORD BAY.

Crawford bay is situated on Kootenay lake in West Kootenay district.

By Order in Council, dated March 16, 1915, the provincial government transferred the wharf, free of cost, to this department. The wharf and site contains 0·24 acre, and is described as follows: From the southeast corner of lot 196, group 1, West Kootenay district, west along the southern boundary of said lot 237½ feet, thence south 196½ feet, which is the approach, thence south 422 feet by a width of 50 feet.

In 1914, the wharf was widened from 20 to 30 feet and lengthened from 180 to 220 feet at a cost of $1,441.75.

During the past fiscal year, an extension was built to the float and a shed constructed at a cost of $540.33.

DEAS ISLAND.

Repairs were made to the existing bank protection mattresses, brush and a scow load of rock being put in to repair shrinkage and wastage, at a cost of about $674. Work was performed by day labour between June 16 and June 24.

DEER PARK.

Repairs were made to fender piles and placing new dolphins at wharf at a cost of $906.75.

EAST ROBSON.

East Robson is a farming and fruit growing settlement on the east bank of the Columbia river, about 7 miles below the lower end of the Lower Arrow lake, and has a population of about 100.

Authority was granted during the year 1914-15 for the construction of a wharf, and work was begun January 13 and completed February 17, 1915.

The wharf is a pile and timber structure 30 feet wide and 332 feet long on a 6 per cent grade, and cost $2,940.11.

EBURNE.

*Dredging.*

The Municipality of Richmond, on Lulu island, is connected by two bridges across the north arm of the Fraser river, with the Town of Eburne, in the Municipality of Point Grey. Sea island, lying midway between the above municipalities, is supplied with a domestic water service by means of a submerged water main across the south branch of the north arm. This main has been subject to frequent breakages owing to a shifting of the sands in the shoal, river channel.

Owing to representations, on April 29, authority was granted, and on June 1 the *King Edward* started dredging a cut some 170 feet long and 90 feet wide to a depth of 10 feet below L.W.O.S.T.

Work was completed on June 4, 5,335 cubic yards, place measurement, of sand and silt being pumped from the cut and deposited on Sea island. This work cost 44 cents per cubic yard, or a total of $510.32.

EDGEWOOD.

Repairs were made to fender piles and dolphins of wharf at a cost of $244.

EVAN'S BAY.

Evan's bay is a sheltered basin of water on the eastern side of Read island, Sutil channel. There is no organized settlement at this point, but the coastal steamers make the bay a point of call to land and receive freight for the settlers in the vicinity. Provincial Government roads traverse the island.

Authority being granted, a float was built and anchored in the bay, the work being performed by day labour.

The completed float is 30 by 40 feet, constructed of cedar logs and timber decking, with the usual chain and cement block mooring. Construction was started on September 15, and the float towed to position on October 23. Total expenditure, $897.81.

FARRINGTON'S.

Farrington's is a farming and fruit growing settlement on the north shore of the west arm of Kootenay lake, 10 miles from the city of Nelson, and is becoming a popular summer resort.

Authority was granted in the year 1914-15 for the construction of a wharf, and work was started August 1, and completed on September 3, 1914.

The structure is a floating wharf 40 feet by 80 feet, held in place by pile dolphins and a floating approach 16 feet wide and 256 feet long.

A freight shed 12 feet by 16 feet was built on the wharf.

The total cost of the work was $5,008.39.

FRASERS.

Frasers Landing is a farming and fruit growing settlement on the north shore of the west arm of Kootenay lake, 19 miles from Nelson. It has a population of about 125.

During the year 1914-15, authority was granted for the construction of a wharf, and work was started September 9, and completed September 21, 1914.

The wharf is a floating structure, 32 feet by 40 feet, with a floating aproach 112 feet long and 16 feet wide. The main float and approach are held in place by piles.

The total cost of the work was $1,323.09.

FRASER RIVER.

*North Arm.*

The work being undertaken at the mouth of the north arm branch of the Fraser river has for its object the making and maintaining of a navigable channel over the sandheads at the mouth of the river. The completed scheme will embrace the dredging of a channel 22,000 feet long and 300 feet wide, to 10 feet at L.W.O.S.T., and the construction of a bulkhead and mattress jetty 22,300 feet long, paralleling the dredged channel on the south side. The above work necessitates the removal of some 3,000,000 cubic yards of sand and the emplacement in the jetty of the following quantities of materials:—5,500 fir piles; 643,000 feet b.m., rough lumber; 132,237 cubic yards mattresses; 22,637 cubic yards loose brush; 186,500 tons rock.

The work is being performed, under contract, by the Pacific Dredging Company of Vancouver, B.C. On March 31, 640,873 cubic yards, or 21·3 per cent, of the materials had been dredged from the channel, 14,700 lineal feet of the jetty had been completed, and an additional 6,600 lineal feet partially completed, the whole at a total cost of $347,238.71.

*Dredging Sandheads.*

The Fraser river sandheads consist of a large delta, some 5½ miles across, from the mouth of the river proper at Steveston to its outer edge in the Straits of Georgia, which is submerged at half tides. At low tides, nearly all of this area is above the water level.

The channel through the sandheads, from a point half way out from Steveston, showed a tendency about three years ago to cut through the sand bars about ¾ of a mile north of the old main channel, and the natural scouring, which has been materially assisted by dredging, has produced a channel which is more direct and shorter than the old one. The new channel now has a minimum depth of 27½ feet on a 12-foot tide. This is considerably better water than has ever been obtained heretofore for the entrance of ships into the Fraser river. There is every prospect for even a deeper channel being obtained by reason of the natural scouring, assisted by further dredging and the training pier on the north side of the channel.

The department hydraulic dredges *No. 303* and *King Edward* have been employed during the year in assisting the natural tendency of the river to form this new channel paralleling the constructed and proposed jetty. The operations of the former dredge have been confined almost entirely to this work, a double crew, working in two shifts of 9½ hours each, having been maintained on the dredge during the year.

The following tables for the two dredges serve to show the work done at this point by each:—

DREDGE *No. 303*.

| Interval during which dredge was digging or otherwise employed. | Cubic yards, hopper measurement. | Material dredged. | Location of dredge. | Remarks. |
|---|---|---|---|---|
| April 1 to Aug. 6 | 559,905 | Clay, sand | Sandheads | New channel. |
| Aug. 7 to Aug. 28 | | | New Westminster | Filling in for city. |
| Aug. 29 to Dec. 3 | | | | Repairs. |
| Dec. 4 to Dec. 18 | | | New Westminster | Filling in for city. |
| Dec 21 to Jan. 25 | 145,390 | Clay, sand | Sandheads | New channel. |
| Jan. 26 to Mar. 31 | | | | Repairs and alterations. |
| Total | 705,295 | | | |

DREDGE *KING EDWARD*.

| Interval during which dredge was digging. | Cubic yards, place measurement. | Material dredged. | Location. | Remarks. |
|---|---|---|---|---|
| April 1 to May 16 | 86,875 | Silt, sand and clay | Sandheads | New channel. |
| June 8 to Aug 4 | 135,764 | Sand, clay | " | " |
| Total | 222,639 | | | |

As will be seen from the foregoing tables 927,934 cubic yards of silt, sand and clay were removed from the new channel during the fiscal year at a total cost of $93,244.75. This total cost is based on the unit prices of 9·61 cents and 11·44 cents for the dredge *No. 303* and *King Edward*, respectively.

On the whole, the dredged channel appears to be maintaining the depth dredged, alternate scouring and filling in of the bottom taking place at different stages of the height of water in the Fraser river.

In addition to the work done at the sandheads by the departmental dredges, there were removed in the fiscal year 1914-15, by the dredge *P.D.C. No. 4* of the Navigation Dredging Company, some 2,471 cubic yards of sand, scow measurement. This work was started on January 3, 1914, and the total yardage removed from that date until the contract was abandoned was 3,493 cubic yards, scow measurement and the contract rate of payment was 23½ cents per cubic yard. Owing to the fact that the dredge could not work to advantage, due to storms, the work was discontinued. The above yardage was removed between April 1 and 23.

FRASER RIVER (LOWER).

*Woodwards Slough.*

This work, consisting of the construction of a wing dam at Woodwards slough on the Fraser river, 12 miles below New Westminster, was performed under contract with Messrs. Hodgson, King & Phalin of Vancouver.

The work was in hand at the first of the fiscal year, and was completed on April 30.

The total cost was $6,550.97.

FULFORD HARBOUR.

The work consisted of the construction of a float 20 by 30 feet, approach 1,450 by 5 feet with a "T" and a freight shed 10 by 8 feet. The work commenced August 3, and was completed September 8, 1914.

The amount expended was $2,115.63.

GANGES HARBOUR.

This work consisted of the construction of a wharf 90 by 50 feet, approach 250 by 16 feet, float 30 by 20 feet, slip 30 by 9 feet and gangway. A freight shed 35 by 20 feet was also constructed on the wharf. Eighteen creosoted piles were used in the construction of this wharf. The work commenced August 14 and was completed September 3, 1914.

The amount expended is $3,700.

GLENEDEN.

An allotment of $7,300 was authorized for this service and the contract was let to Messrs. James MacDonald & Company for building a pile bent and timber decking structure consisting of a level approach 428 feet long by 16 feet wide, a turning block 42 feet long by 32 feet wide provided with a shelter shed 20 feet by 12 feet, and a sloping outer end 126 feet long by 16 feet wide falling from deck level of the approach platform and turning block to 2 feet above low water level at the outer end on a grade of 1 in 11½, nearly. Work was commenced on November 5. Owing to an error in the pile bent cutoffs, work was closed down between November 17 and 24, while an agreement as to the adjustment of payment for the error was being arrived at. The wharf was completed on December 16, and the total expenditure is $5,535.45.

GOOSE BAY.

The construction of a landing float for small gasoline boats was authorized. This float was built at Dodge cove, Digby island, and towed to Goose bay and attached to the department's wharf at that point. The cost of this work amounted to $213.69.

GRACE HARBOUR.

Grace harbour is situated on the southwestern end of Gambier island, Howe sound, 25 miles northwest of Vancouver. There is no organized settlement but the regular steamers plying on the sound make it a daily point of call to take on and deliver freight for a number of settlers and farmers on the southerly part of the island.

Authority being granted on June 16, an agreement was entered into with James McDonald and Company to build a wharf at the end of a public highway in the harbour at unit prices of $35 and $15 each respectively for creosoted, and fir piles and $30 per M. for timber, both in place.

Work was commenced on July 26, and completed on August 16, at a total cost of $4,300.05.

The completed work consists of a pile bent and timber superstructure wharf 40 by 60 feet and approach thereto 225 by 14 feet together with a small boat float 16 by 36 feet, to afford mooring room for numerous launches which call at the wharf. The usual store-house 10 by 18, gangway and slip were provided.

GRAHAM'S LANDING.

On March 25, the departmental dredge *Sheldrake* began operations at Graham's landing with the object of opening a clearly defined channel, where the steamboats cross from the deep water channel on the west bank to the deep water channel on the

east bank. To March 31, 1914, a channel 450 feet long and 75 feet wide, with a minimum depth of 9 feet at low water, had been excavated.

During the season 1914-15, operations were continued at this point by the dredge *Sheldrake,* between the following dates: From April 1 to May 2, 1914; September 23 to October 18, 1914; October 22, 1914, to February 1, 1915; and from March 16 to March 31, 1915, at which latter date the dredge was still working and the cut was practically completed. During these periods, a cut 2,977 feet long and 150 feet wide, with a minimum depth of 8 feet at low water, was excavated. The material removed and overcast is an admixture of sand and clay, chiefly sand, and amounted to 79,400 cubic yards, place measurement, or 86,155 cubic yards, scow measurement at a cost of $9,252.18.

### GRANITE BAY.

Granite Bay is situated on the east coast of Upper Valdez island, 120 miles northwest of the City of Vancouver.

There is no organized community on the bay, but a post office, store and railway terminal of a large logging company make it a central point for farmers, miners and loggers in the district. Coastwise steamers make the bay a regular point of call and unload considerable quantities of freight when the mines and timber camps are operating.

Authority was granted on June 16 for the construction of a wharf at Granite bay, the same to be let by contract.

Further inquiry being made into the amount and value of shipping and the requirements of the settlers, it was asked that a float be substituted for the pile-bent wharf, reducing the estimate cost from $7,500 to $3,160.

This work was performed by day labour in the interval August 10 to November 4, at a total cost of $3,065.16.

The completed work consists of a float 36 by 50 feet, with a floating approach thereto 609 feet long by 6 feet wide, together with the necessary anchorage, boom logs and shed, 12 by 20.

### GREEN'S LANDING.

Between July 2 and July 5, the shed was enlarged, and 8 new piles and 4 caps were placed at a cost of $147.81.

### HALL'S LANDING.

Hall's Landing is a farming and fruit growing settlement on the west side of the Columbia river, 3 miles above the head of the Upper Arrow lake. It has a population of about 150 and has a very large acreage of first-class land available for cultivation, which is being rapidly cleared up and improved.

During the year 1914-15, authority was granted for the expenditure of $5,000 for the construction of a wharf, and the work was started November 19 and completed December 23, 1914, at a cost of $3,492.64.

The wharf is a pile and timber structure, 150 feet in length and 32 feet in width, on a grade of 1 in 10, and there is an approach 16 feet wide, 60 feet long, from the government road to the head of the wharf. On the upper corner of the wharf to the bank of the river, a pile and a timber breakwater was built to prevent the lodgment of driftwood, and all the face of the breakwater and of the wharf was planked with 3 by 12-inch plank 6 inches apart, to keep the driftwood from lodging against the wharf.

### HAMMOND.

Repairs were made, December 3 to December 12, by adding a new slip, placing new joists, planks and 17 piles at a cost of $315.75.

HARRIS ROAD.

Harris Road landing is at the junction of a provincial government road and the Lillooet river, a small river emptying into the Pitt and thence into the Fraser. The landing is situated 5 miles above the junction of the Pitt and Fraser river, and 11 miles from the City of New Westminster. It is in the centre of a rich agricultural district and a considerable quantity of supplies, farm produce, etc., is shipped in and out.

Authority was granted, a small wharf and approach, of irregular shape to conform to the location, and having a total area of 1,292 square feet, was built on pile bents in such a manner that the approach opened on the adjacent highway bridge.

The work was performed by day labour with the departmental plant, between December 16 and January 11, at a total cost of $1,122.46.

HARROP.

Repairs were made to dolphins at a cost of $167.20.

HERIOT BAY.

Heriot Bay is situated on the southwesterly coast of Upper Valdez island, some 110 miles northwest of the City of Vancouver. Heriot Bay is the oldest and most important settlement on Valdez island, being a supply depot for logging companies in the district and a summer resort of some importance, a large hotel near the site of the wharf catering to this business.

Authority being granted on June 16 for the construction of a new wharf at this point, an agreement was entered into with James McDonald and Company to perform the work at unit prices of $35 and $15 each, respectively, for creosoted and untreated piles, and $30 per M for timber, both in place.

The completed work consists of a pile-bent and timber superstructure wharf 40 by 60 feet, an approach thereto 135 by 14 feet, and a small-boat landing float 18 by 28 feet.

Work was started on September last and completed on September 19, at a total cost of $4,800.77.

HOLBERG.

The work consisted of repairing the damage done by the Canadian Pacific Railway SS. *Maquinna*; replacing 5 piles, caps, stringers and decking. The work commenced June 22 and was completed June 29, 1914. The amount expended was $169.20.

HOLLYBURN.

*Dredging.*

Hollyburn is the business centre of the Municipality of West Vancouver, situated just outside the first narrows of Burrard inlet. West Vancouver is a residence suburb of Vancouver, and has a population of about 500. Considerable local business is carried on between Hollyburn and Vancouver city by means of a local ferry, scows and launches.

On representations made by the West Vancouver council, it was recommended that some dredging be done alongside the government wharf to afford 6 feet of water at L.W.O.S.T., to allow scows and launches berthing room at the dock. This work was authorized on July 22, and an agreement was entered into with Mr. J. W. Pike to perform the dredging at 30 cents per cubic yard for material in place, and 20 cents per cubic yard for material overcast.

Work was commenced on August 10, and completed on September 20, 2,769 cubic yards, *in situ*, of heavy gravel and stones being removed, and 1,704 cubic yards over-

east, a total of 4,473 cubic yards. The completed work comprises a cut some 162 feet long, and 50 feet wide, and having a depth of 6 feet at L.W.O.S.T. The total cost was $1,439.95.

JACKSON BAY.

Jackson bay is situated on the mainland coast some 165 miles northwest of the City of Vancouver.

There is no organized community at Jackson bay, but it is used as a point of call for the coastal steamers which unload supplies, mail, etc., for the settlers within a 20-mile radius. The settlers use their own launches and boats for transporting their freight, from the float provided, to their own homes.

Authority being granted on June 16 to build a landing float on the "Bay,' the work was put in hand by day labour.

The completed work consists of a cedar log and timber decked float 36 by 50 feet, with the usual anchorage, and shed 12 by 24 feet. Construction was started on August 1 and completed on September 10 at a cost of $996.92.

JOHNSON'S LANDING.

Johnson's Landing is a farming and fruit growing settlement on the east side of Kootenay lake, about 7 miles from Kaslo. The population at present is small but the land is rapidly being settled and improved. On account of the bad nature of the beach, it is impossible to land during the low water season. Authority was granted for the construction of a wharf during the season 1914-15, and the work was started September 22, and completed October 21, 1914. The total cost of the work being $1,822.41.

The wharf is a floating structure, 40 feet by 30 feet, with a floating approach, 12 feet wide and 160 feet long, the whole being held in place by pile dolphins.

KASLO.

The City of Kaslo is the centre of one of the most important silver-lead mining districts in British Columbia. It has a population of about 600 and is the distributing centre and headquarters for a number of mining camps in the Slocan district. Communication with the mines was formerly maintained by the Kaslo and Slocan railway, a subsidiary line of the Great Northern Railway Company of the United States, who operated a narrow gauge train from Kaslo to Sandon. A few years ago, damage was done to the road by snow slides and on account of the quietness of the mining industry at that time, operations ceased on the railroad. This condition continued until 1912, when a syndicate composed of the local business and mining men purchased the road and rolling stock, with the intention of resuming operations, as proper transportation was all that was required to put mining on a paying basis. Shortly after the purchase of the road by the syndicate, negotiations were entered into with the Government of British Columbia and the Canadian Pacific Railway Company with the result that the Government granted a bonus to the railway company, who took over the road and standardized it and it is now being operated by them. Formerly the Kootenay lake terminus of the road was at a small timber and rock crib wharf at Kaslo, but this had fallen into very bad state of repair and was unsuited for the business to be done over it.

Authority was granted in 1913-14, for the construction of a pile timber wharf and the contract was let to William English of Kaslo for the work on December 26, 1913, for the sum of $13,500. The work was started February 1, and completed on May 31, 1914. On April 21, 1914, authority was granted for the construction of an

additional 98 feet on the wharf and the removal of the old Great Northern cribbing, at a cost of $2,110, but owing to the rising water in the lake, it was impossible to complete the work until March, 1915.

Total expenditure for 1914-15 was $16,170.15.

KINKOLITH.

A landing float for gasoline boats having been authorized, the float was constructed at Dodge Cove, Digby island, and towed to position at the department's wharf at Kinkolith, at a total cost of $249.54.

KITIMATT.

Examination and report were made on the advisability of the Department constructing a wharf at Kitimatt, Comox-Atlin district. It was found that a landing float at which steamers could tie would serve the purpose better than a pile wharf, it was therefore recommended that such a floating wharf be constructed and an appropriation of $2,450 was asked for this purpose.

KITIMATT RIVER.

This river has become so obstructed by fallen trees and other floating timber that it has entirely overflowed its banks and flooded some three thousand acres of land to a depth of about five feet. This matter was gone into very thoroughly and an appropriation asked for to remove the obstruction in order that it may not occur again.

LANGLEY.

General repairs were made to the existing retaining wall consisting of new holding brace rods, planking and brace piles. Considerable new brush and some 250 tons of rock were also deposited behind the wall to repair shrinkage and wastage.

The work was performed by day labour in the interval May 30 to June 13, at a cost of approximately $812.

LOCKPORT.

A landing float for small gasoline boats having been authorized for Lockport, Morsby island, one of the Queen Charlotte islands, it was constructed at Digby island, Prince Rupert harbour, but owing to the heavy weather no tug could be found to tow it to Lockport. It is yet at Digby island and will be placed at an early date. Expenditure to date, $79.44.

LONGBEACH.

*Dredging.*

During the season 1913-14, a departmental wharf to accommodate passenger steamers, of a maximum draft of 5 feet, was constructed at Longbeach, formerly Hallett's. Owing to the fact that tug boats of a draft of approximately 8 feet, were placed in the passenger service, it was found necessary to dredge at the west end of the wharf.

On April 1, 1914, the department dredge *Bittern,* began operations at this point and completed work on April 4, 1914. During this time, a cut 60 feet long and 40 feet wide was made with a minimum depth of 8 feet at low water. The material moved and overcast, consisted of sand and gravel and amounted to 755 cubic yards, scow measurement, at a cost of $125.45.

LUND.

Lund is a settlement on the mainland coast some 82 miles northwest of the City of Vancouver.

A large hotel, store, post office, telegraph office and boat repair shop make Lund a point of importance in the northern district. Large quantities of retail and wholesale supplies are distributed to lumber camps and to settlers in the vicinity.

On June 18, authority was granted to demolish the old provincial government wharf and replace it with a large and more stable structure.

Arrangements were made with James McDonald & Company to perform the work at unit prices of $22 and $15 each, respectively, for hardwood and fir piles and $30 per M. for timber, both in place. The hardwood piles were supplied to the company from the Department of Public Works stock at New Westminster.

The completed work consists of an irregular shaped wharf having an average length of 89 feet and a width of 68 feet, with a post bent approach 95 feet long and 16 feet wide. The work was put in hand on September 30, and completed on October 28, at a total cost of $4,869.17.

### MAGARS LANDING.

Magars landing is situated on the Fraser river some 37 miles east of New Westminster city. There is no organized settlement at this point but several provincial government roads make it accessible for a large number of farmers who use it as a receiving and shipping point for supplies and general farm produce. Steamers plying on the Fraser make Magars a regular point of call.

Authority being granted, a pile bent and timber decking wharf 40 by 50 feet with inclined slip 87 by 12 and an approach thereto 130 feet long by 14 wide was built at the end of a public highway.

Work was performed by day labour with the departmental plant. Construction was started on October 5 and completed on October 31; the total expenditure being $1,849.60.

### MALCOLM ISLAND (SOINTULA).

Sointula is a village situated on the southerly coast of Malcolm island some 195 miles northwest of the City of Vancouver. The village is a trading and meeting centre for a large community of Finlanders who have settled on the island and who import quantities of hay, fodder and general supplies, and ship out large quantities of eggs, fowl, fish and general produce to the Vancouver market.

On June 16, authority was granted to construct a new wharf on the site of a provincial government wharf which had been washed away by a storm during the winter of 1913.

An agreement was entered into with James McDonald and Company to carry out this work at unit prices of $35 and $15 each, respectively, for creosoted and untreated piles, and $30 per M. for timber, both in place.

The new wharf consists of a pile bent and timber superstructure wharf and approach, the respective dimensions being 90 by 35 feet and 185 by 14 feet. A storehouse 16 by 20 was built on the wharf and the old storehouse, 16 by 20 is now used as an additional shelter.

The work was performed in the interval August 13 to 29 at a cost of $498.60.

### MARSH'S LANDING.

Marsh's landing is situated on the Fraser river some 25 miles east of the City of New Westminster. There is no organized community at the landing, but it is a point of call for steamers plying on the Fraser. The surrounding country is rich agricultural land, and is thickly settled by farmers, who use the landing for getting in supplies and for shipping out considerable quantities of general farm produce, hay and other fodder.

On May 7, authority was granted to proceed with the construction of a wharf, and on July 6 work was commenced by day labour, and completed on October 3.

The wharf is of pile bent and timber decking construction, and consists of a pier-head 40 by 50 feet, an inclined slip 72 by 12 feet, and an approach 45 by 14 feet.

The total expenditure was $1,964.68.

MATSQUI.

Matsqui is a village situated 1½ miles off the Fraser river, and some 30 miles east of the City of New Westminster.

A public wharf on the river affords a receiving and shipping point for the residents of the village and the farmers of Matsqui municipality. Valuable farming lands along the river are protected by dykes and the erosion of the banks, endangering these, made it necessary to protect them with wing dams and mattresses.

The work done during the year consisted in repairing the existing wing dams, constructing and placing two 30 by 30-foot mattresses and weighting these with a talus of broken rock.

The work was performed by day labour with the departmental plant, between May 8 and June 28, at a total cost of $1,759.93.

MISSION.

Between November 2 and 25, new slip and superstructure were built and 11 new piles were placed at a cost of $1,108.30.

MOUNT LEHMAN.

Between November 23 and December 2, new joists, planks and 22 new piles were placed in the work at a cost of $533.10.

NAKUSP.

Nakusp is a farming and lumbering town on the east side of the Upper Arrow lake, 36 miles from Arrowhead. The population of the town and district is about 600. There are two saw-mills, shingle mill, pole yards and ship building yard in the town, and 5,000 acres of agricultural land tributary to it. It is also the Arrow lakes terminus of the Nakusp and Slocan branch of the Canadian Pacific railway, connecting with Slocan lake and Kootenay lake points.

During the year 1914-15, authority was granted for the construction of a wharf at this point, and work was begun on October 26, and continued until November 30, 1914, and was resumed on February 8, and completed on February 27, 1915.

The wharf is a floating structure, 40 by 80 feet, with a floating approach 16 feet wide and 311 feet long. The main float is held in place by pile dolphins and the approach held in place by single piles on each side of each 16-foot section.

The total cost of the work was $5,269.94.

*Dredging.*

To facilitate the construction of the approach to the new wharf at Nakusp, a rock and timber crib containing 40 cubic yards had to be removed.

On October 19, 1914, the departmental dredge *Sheldrake* began operations at this point and completed the removal of the crib on October 21 at a cost of $264.45.

NANAIMO HARBOUR.

*Dredging.*

The object of the dredging performed in the above harbour during the past season has been the improvement of the south channel and the provision of a turning basin

at the southerly end of the Western Fuel Company's loading wharf, dredging of silt and removal of rock in front of the above end of the ballast wharf, and the removal of rock in the north channel. The rock breaking was performed by the Lobnitz rock crusher *No. 2* which worked from April 20, 1914, to the end of the fiscal year, the removal of rock by departmental dredge *Victoria,* which worked from December 21, 1914, to March 11, 1915, and contract dredging was undertaken by the Pacific Dredging Company's hydraulic dredge *Robson,* which worked from June 29 to September 16, 1914.

Regarding the contract work by the dredge *Robson,* difficulty was encountered in accurately estimating the work performed on account of silting in from the Nanaimo river, the amount of which could not be estimated as the preliminary soundings were taken in July and August, 1913, and as no new soundings were taken immediately before dredging there is no doubt that silting took place during this period and it would have been unfair to the contractor to give him credit for only the material shown to have been removed by the preliminary soundings and those taken after the completion of the dredging. The total quantity of 117,715 cubic yards of material removed as given by the inspector's reports gave, in my opinion, as closely as it is possible to estimate, the actual amount of material removed, this estimates an average of 1 foot silting in. The above work gives a width of 400 to 500 feet in the south channel dredged to 30 feet at low water. Owing to a mistake in the base line of 100 feet, the *Robson* worked over the channel line; this can be looked upon as rather an advantage than otherwise as should additional dredging be performed in this vicinity a channel 500 feet wide can be provided with comparatively little additional work. This will be of considerable assistance to navigation in view of the large size of the steamers going into Nanaimo harbour for coal. In the vicinity of the loading wharf, a portion of the material appeared to be of such a nature that the *Robson* was not able to deal with it with much success.

The contract rate of payment for the above work performed by the Pacific Dredging Company's dredge *Robson* was as follows:—

One hundred and seventeen thousand seven hundred and fifteen cubic yards at 23½ cents, $27,663.02. Nature of material removed, mud, sand and gravel.

The Lobnitz rock breaker has worked on blocks H and I and on Nicol rock, the latter being a mass of rock of considerable size, the removal of which will, of necessity, be a matter of time. On block I, the removal of rock has been satisfactory, giving a depth of about 29 feet at low water at this point. Six hundred and ninety cubic yards of rock have been removed out of an estimated quantity of rock broken of 850 cubic yards. On block H, the estimated quantity of rock broken is 3,045 cubic yards, 1,540 cubic yards being removed by the *Victoria;* difficulty being experienced owing to the rock forming into soft sand-like substance difficult to pick up by the dredge. The estimated quantity of rock broken by the Lobnitz on Nicol rock was 5,786 cubic yards, of which 1,710 cubic yards were removed by the *Victoria;* difficulty in the removal of the above experienced at this point being caused by cement-like substance binding the broken rock together after the Lobnitz rock breaker's work. Most of the rock removed here was taken from the southern portion of Nicol rock where cementing took place to less extent. Total estimated quantity of rock broken by the Lobnitz during the season was 11,094 cubic yards, and the total quantity removed by the *Victoria* was as follows:—

| | | |
|---|---|---|
| Rock | 3,940 | cubic yards. |
| Mud | 630 | " |
| Gravel | 260 | " |
| Total | 4,830 | scow measurement. |

Van Anda, B.C.

Whaletown, B.C.

For the first six months of operation by the Lobnitz, considerable adjustment and overhauling of machinery was necessary, being a new machine recently put together. From September, the work performed showed considerable improvement.

The work of chief importance during the coming year is the further removal of rock from the north channel and Nicol rock and in front of the loading wharf.

A survey was made to ascertain the feasibility of diverting the course of the Nanaimo river to prevent silting up taking place in the harbour. Under present conditions silting up is likley to take place.

The total cost of rock breaking and removal of same by departmental plant was $24,132.77.

*Landing.*

The appropriation for this work was $1,750. Of this amount a sum of $550 was set aside for the purpose of effecting urgent repairs to the Farmer's landing, the sum of $525 being expended. This work was commenced on September 21 and was completed on October 14, 1914. The sum of $1,225 is available for the construction of a proposed approach to this landing. This work has not yet been commenced pending information required regarding the ownership of the water lot which the proposed approach crosses.

NEEDLES.

Needles is a farming and fruit growing settlement on the west side of the Lower Arrow lake, is also the landing place for the Whatshan valley, a large agricultural district on the Whatshan river. The population of the district is about 250.

Authority was granted during the year 1913-14, for the construction of wharf, but owing to difficulty in securing title to the land, it was not possible to proceed with the construction that year. The title was secured in 1914 and some of the material being already on the ground from the previous year, work was started July 25, and was completed August 11.

The wharf is a floating one, the main float being 40 by 80 feet, held in position by pile dolphins; the approach is also floating and is 16 feet wide by 241·7 feet long, held in place by piles on each side of each 16-foot section. The sections are hinged together by iron straps one-half inch by 3 inches, held in place by 1-inch bolts. A freight shed 12 by 16 feet has been placed on the wharf.

The total cost of the work, including expenditures in the year 1913-14, and the year 1914-15 was $6,762.84.

NELSON.

*Dredging.*

Nelson is a city of approximately 7,000 population, situated on the west arm of Kootenay lake. There are 250 launches and motor boats on the lake, about 175 of which are moored in Nelson harbour. During a portion of the season 1913-14, the departmental dredge *Bittern* operated at this point and material amounting to 16,994 cubic yards was excavated.

On April 30, 1914, the departmental dredge *Bittern* began operations in Nelson harbour and continued till rising water forced her to close down on May 26, 1914. Work was resumed on August 4, and completed August 29, 1914. During this time, two cuts were made; one 445 feet long and 40 feet wide, and the other 260 feet at low water. The material moved, sand, gravel and silt, amounted to 11,500 cubic yards, place measurement, or 13,230 cubic yards, scow measurement, at a cost of $2,203.50, handled by dump scow. Expansion factor 15 per cent. This work provides a channel at low water stage, from the lake to the foot of Josephine street also a mooring basin for launches.

*Wharf.*

A shed was built at Nelson for the storage of material, at a cost of $425.69.

NELSON FERRY.

*Dredging.*

In 1912, the Provincial Government established a ferry service between Nelson and points on the north side of the west arm of Kootenay lake. To enable this ferry to berth conveniently at low water stage, dredging was necessary on the north and south side of the arm, respectively. On April 9, 1914, the departmental dredge *Bittern* began operations at this point and completed the cuts on April 21, 1914. During this time, two cuts, 160 feet and 85 feet in length respectively, and 50 feet wide, with a minimum depth of 3·5 feet at low water, were made. The material, all overcast, sand and gravel, amounted to 1,810 cubic yards at a cost of $364.49.

NEW MASSETT.

A landing float for small boats was authorized and the float was constructed at this point and attached to the Department's wharf. The expenditure amounted to $297.69.

NEW WESTMINSTER.

*Dredging.*

The site of the dredging petitioned for on Lulu island, part of which was performed and is dealt with in this report, is on the north arm of the Fraser river, and on the north-east end of Lulu island. Several industries are located at this point, among them the Heaps Engineering and Ship Repair Shops and Yards. It was asked that some 48,000 cubic yards of silt and sand be dredged from a bar which has formed just to the west of the Lulu island bridge and fronting the Engineering Works. This work involves the dredging of a slipway or channel 810 feet long, of an average width of 195 feet in front of the plants of the Star Shipyard Company, the New Westminster Marine Railway and the Heaps Engineering Works, to 10 feet at L.W. O.S.T.

Owing to the urgency of this work, it was asked on December 28, 1914, that the *King Edward* be allowed to proceed to the site and perform one week's dredging in the proposed cut. On December 29, authority was granted and the dredge started operations on January 4. Work was continued till the 14th. A cut 550 feet long and 150 feet wide was dredged to 8 feet at L.W.O.S.T., 17,535 cubic yards, place measurement, of silt and sand being removed and wasted on Poplar island and on Lulu island under the Heaps Engineering Company's works. This cut, commencing at the 8 foot contour line to the west, makes an open channel from the deep water of the north arm to the Heaps Engineering Works for tugs and other craft proceeding to the marine railways or the shops for repairs, etc.

The cost of this work, is $2,006.

Owing to the shifting nature of the sand bars in the Fraser waters, it is impossible to tell whether the depth dredged will be maintained, or be subject to further deepening by the scouring action of the currents. The complete scheme as outlined in earlier reports should prove more permanent than the dredging done, as it provides a deeper and longer channel for the sweep of the current.

On June 25, authority was granted for the departmental dredge *No. 303* to perform certain work for the municipal corporation of the City of New Westminster. This work consisted in dredging sand from the Annieville bar opposite Annacis

island, in the Fraser river, and depositing it behind the bulkheading of the city wharf, recently completed, at an agreed price of 5¾ cents per yard, hopper measurement.

In the intervals between August 7-28 and December 4-18, 111,355 cubic yards were dredged and deposited, and accounts for this work for $3,873.97 and $1,972.16 were rendered the city council; these were paid.

### NICOMEN (M'DONALD'S LANDING).

McDonald's bar or landing is situated on the Fraser some 36 miles east of the City of New Westminster, and in the centre of valuable farming lands. These lands are protected from the high waters of the Fraser floods by dykes constructed jointly, at considerable cost, by the Provincial Government and the farmers.

On November 15, permission was asked to construct temporary protection work along the north bank of the river, as the currents had broken down the natural bank to within 60 feet of the dyke. Extensive measures are at present being undertaken on the opposite side of the river to divert the main body of the waters into a channel that, being straighter, will relieve the situation on the north or Nicomen island side. The work asked for and performed will afford the necessary protection until the larger work is completed.

Authority being granted on November 27, the work was put in hand on December 8, and completed on February 6, at a cost of $4,605.79. The work, which was performed by day labour, consisted in the construction and placing of 33 mattresses, each 25 by 25 feet, and the weighting of them with some 1,400 tons of rock. The completed apron has a total length of 850 feet and a width of 25 feet.

### NICOMEN ISLAND.

#### *Dredging.*

Nicomen island is situated on the Fraser river, some 36 miles east of the City of New Westminster. The island is roughly 7 miles long, has an average width of 1½ miles, and its area approximates 6,750 acres, most of which is under cultivation and is very valuable. The main body of the Fraser waters flowing along its southerly length is very rapidly eroding the banks of the island, and endangering a newly constructed dyke, erected at considerable cost by the farmers, by reason of an extensive bar which has formed on the opposite bank and diverts the strong currents of the river toward the island.

As a result of urgent representations made by the municipal authorities of Nicomen, and the dyking commissioners, a comprehensive scheme for the protection of the island was formulated. Part of this work was the digging of a channel some 3,600 feet long, and 150 feet wide, increased to 300 feet at the upper end, through the above-mentioned bar to 4 feet below extreme low water level.

On January 28, 1914, authority was granted to have the departmental dredge *King Edward* proceed to Nicomen and dredge the cut as laid out. Owing to more pressing need for further dredging at the sandheads, and later the unfavourable height of water in the Fraser river, the dredge did not proceed to Nicomen until November 2. In the intervals, November 3 to December 16, January 18 to February 15, and March 12 to March 27, 142,910 cubic yards of silt, sand and gravel were removed and pumped back clear of the bar, at a unit cost per yard, 11·44 cents; the cost of removing the above yardage was $16,348.90. Since February 1, the dredge has been operated by day and night shifts.

There remains to be removed of the estimated 340,000 cubic yards, 197,090 cubic yards, or 58 per cent. The removal of the balance of these materials proving too dif-

ficult for the *King Edward,* an agreement has been entered into with Messrs. Moore and Pethick, of Victoria, to perform the excavation work to L.W. level with teams, donkey engines and scrapers.

Considerable trouble was experienced during the operations of the dredges owing to snags and other debris which had become buried in the bar, and to the distance and elevation the material had to be pumped, the length and elevation of the discharge pipe being at one time 1,015 feet and 19½ feet respectively. Means, independent of the dredge and crew, were taken to lessen the trouble and delay from snags and drift.

NOOTKA ISLAND.

This work consisted of the construction of a wharf 125 by 40 feet, freight shed on the wharf 16 by 35 feet, approach 158 by 12 feet and a float 16 by 30 feet with gangway 30 by 4 feet. The work was commenced June 19, and was completed August 31, 1914. The amount expended was $4,500.

OKANAGAN LAKE AND RIVER.

The departmental dredge *Heron* is employed on the Okanagan lake and river system, and during the past season has been engaged chiefly on an extended programme of work in the Okanagan river between the Upper and Lower Okanagan lakes, which is aimed to provide an improved grade and channel throughout this river and to promote a more active flow through the upper reaches and thus enable the Upper Okanagan lake to be held at one level by means of a controlling dam at the head. The channel was opened in previous years to at least 3 feet of depth at low water and 40 feet in width throughout the whole length of the river, a distance of 6 miles, and the later work has been done to maintain this prepared channel and at the same time to cut down towards the upper and drawing the water off the marsh land there, increasing the grade, velocity, and discharge so that high water shall no longer be accompanied by backing up and flood at this end.

The Okanagan district hardly requires description. It is a populous fruit growing valley, and the general, in fact almost universal, opinion of the settlers is that the work being undertaken along lines noted above is of great advantage.

The range between high and low water is seldom greater than 4 feet in the Upper Okanagan lake, and as this lake is fed only by small mountain streams whose flood waters are from year to year becoming more and more impounded for irrigation storage, the rise promises to become even less than average in the future.

A cut was at different times put through in the Okanagan river. The dimensions of this cut, by survey, were: length, 6,600 feet; width, 40 feet, with an average depth of face removed of 2·7 feet, the material being sand, clay and gravel. A total of 29,473 cubic yards was handled at a cost of $7,880.27 or 26·73 cents per cubic yard nearly. This work was in progress during the following periods: May 15 to December 20 and March 5 to 31. On March 31, a small cut about 140 feet in length remained below the Kettle Valley Railway bridge, to complete this particular work. Throughout the whole distance, a very uniform bottom 6½ feet below present low water has been made except at the lower end where there is a short stretch of 5½ foot water. The depth throughout will be reduced by the continuation of the channel improvement programme, the ultimate object of which is to provide a minimum low water depth of 3 feet with a more uniform current.

From April 1 to May 14, time was employed pulling snags, pile driving, clearing banks, making minor repairs, and preparing for work generally.

From February 1 to 9 the *Heron* was employed making a cut in the Okanagan river away from the channel, to enable the Penticton Lumber Company to float logs from the Kettle Valley railway spur to their jack-ladder. This work was authorized on December 30. The cut is 319 feet long and 25 feet wide with an average depth of face

removed of 2·9 feet, 863 cubic yards of clay and sand were overcast and 317 yards re-overcast at a total cost of $310.30 or 26·29 cents per yard nearly.

*Control Dam.*

During the month of April, snags were removed from the river channel and banks were cleared of sweepers. On December 7, the construction of a dam was commenced at the head of the Okanagan river, where it outlets from the Okanagan lake. This dam is being installed as a preliminary measure to control the discharge of the Okanagan river and to assist in maintaining a constant level in the lake. The structure consists of eleven stone filled timber cribs each 4 feet by 5 feet 3½ inches and 5 feet deep set on a piling and timber sill foundation. There are 9 stop-log openings each 8 feet wide and one clear opening 50 feet wide near the middle.

Work on this service was discontinued on March 31, the expenditure incurred amounting to $3,695.17.

From February 10 to March 4, the *Heron* was employed excavating a berth for the controlling dam. The work consists of 3 portions, one with an area of 3,150 square feet and an average depth of face removed of 2·7 feet, a second with an area of 3,610 square feet and an average depth of face removed of 4·7 feet, and the third with an area of 10,400 square feet with an average depth of face removed of 2·2 feet, 1,796 cubic yards of cemented sand and clay were overcast and 719 yards were re-overcast at a cost of $781.39 or 31·06 cents per yard nearly.

During the whole season, the *Heron* handled a total of 33,168 cubic yards of material at a gross cost of $8,971.96 or 27·05 cents per cubic yard nearly.

PITT LAKE (UPPER).

Upper Pitt lake is the head of navigation for a stretch of water running from that point to the Straits of Georgia, a distance of 54 miles, and embracing a portion of the Fraser river, the Pitt river and Pitt lake. Logging and mining companies operate in the vicinity, and the Pitt valley is fast becoming settled with farmers.

On June 16, authority was received to proceed with the construction of a float and approach and the work was put in hand on July 30 by day labour, and completed on September 15 at a cost of $3,978.41.

The completed work consists of a cedar log and timber decked float, 40 by 50 feet, with a pile bent turning block and approach thereto 775 feet long and 10 feet wide. The usual storehouse, gangway and hand railing are provided.

PITT RIVER (LOWER).

The lower Pitt River wharf is situated at the end of a Provincial Government road in the municipality of Coquitlam, some 6½ miles west of the City of New Westminster. This point is without boundaries of the City of Port Coquitlam, but the wharf built there is considered and is used as the city wharf. Port Coquitlam is the western freight terminus of the Canadian Pacific railway; present population, 1,000.

Authority being granted on June 16, construction was started on July 20, on a new wharf to replace the old structure which had become inadequate and unsafe. This work was performed by day labour with one of the departmental pile driving plants. Work was completed on September 19 at a cost of $4,060.89.

The new wharf is of pile-bent and timber superstructure construction, and consists of a pier head 80 by 60 feet with an addition to the old approach 300 feet long and 16 feet wide. The old portion of the approach, 100 feet long, was repaired and strengthened.

*Dredging.*

This dredging was performed at the junction of the Pitt and Fraser rivers; the object was to provide a navigable channel 300 feet wide and 25 feet deep at low tide, through a bar which has formed at that point. A contract was entered into with the Pacific Dredging Company to remove 879,000 cubic yards of material, place measurement, class B material, at 18 cents per cubic yard.

Work was started on November 11, 1913, and at the end of the fiscal year 1913-14 about half of the channel had been completed. On April 1, 1914, there remained 401,410 cubic yards to be dredged under original contract. It was found that owing to the bar having silted up since the original survey that the total quantity to give a channel 300 feet wide the full length of the cut, would be increased considerably, and it was decided to make one cut 150 feet wide through the lower end of the bar and have the widening of this part of the cut left to the departmental dredge *King Edward,* and 74,000 cubic yards were authorized over and above the original amount.

The total amount removed during the fiscal year 1914-15 was 474,328, at a cost of 18 cents per cubic yard, amounted to $85,379.04; this with the cost of inspection, $704.20, makes a total expenditure on Pitt river dredging of $86,083.24.

PORT CLEMENS (QUEENSTOWN).

The departmental wharf which is situated at the head of Massett inlet, Graham island, one of the Queen Charlotte Islands, had become badly damaged by the action of teredos, although the wharf was only completed in November, 1913. Report was forwarded with the recommendation that repairs be made and an appropriation of $5,900 was asked to repile this wharf with creosoted piling.

PORT MOODY.

Port Moody is situated on the southerly shore of Burrard inlet, some 10 miles east of the City of Vancouver. A portion of the municipality was recently incorporated as a city. Being on the main line of the Canadian Pacific railway and fronting on the deep sea water of Burrard inlet, the city is well located as a site for industries. At present a large sawmill and an oil refinery are located there.

In 1908, the Government built a wharf, some 445 feet long, at the foot of Queens street. Increased business and need for deeper water off the face of the wharf made necessary an extension of 1,695 feet to secure 11 feet of water at low tide. This work was performed by contract during the fiscal year 1912-13. A further increase in the amount of freight handled on the wharf made necessary an increase in the size of the outer end, or pier head, of the wharf and it was asked that this be enlarged by an addition to the outer face of the wharf.

Authority being granted on June 16, an agreement was entered into with George Griffiths of Vancouver to extend the 64-foot face of the wharf out a distance of 40 feet. Unit prices of $22.50 and $7.50 each, respectively, for creosoted and untreated piles and $28 per M. for timber, both in place, were paid for the work, which was performed in the interval September 9 to 24, at a cost of $2,317.05.

POWELL RIVER.

*Dredging.*

The town of Powell River is the largest and most important manufacturing and shipping point between the cities of Vancouver and Prince Rupert. Situated on the open mainland coast of British Columbia, and in the centre of immense pulp wood areas, it has become a town of considerable importance in the paper making industry. All transportation being by water, and there being no natural harbour, it was necessary

to provide shelter and berthing room for the numerous steamers bringing in supplies and raw material, and taking out yearly some 75,000 tons of paper, valued at $3,500,000. This was accomplished by the Government building a breakwater pier to the southeast of the town, and dredging a berthing channel and basin alongside the Powell River Paper Company's wharf.

Four cuts were dredged: The first, 70 feet wide and 500 feet long, alongside the company's wharf and from deep water inwards, provides 30 feet of water at L.W.O.S.T. for the deepest draught vessels; the second, having an average width of 80 feet and length of 420 feet, adjoining No. 1 cut on the east, was dredged to 25 feet at L.W.O.S.T., this cut provides a mooring ground and passageway to the inner end of the wharf; the third, having an average width of 115 feet, and length of 350 feet, is a continuation of Nos. 1 and 2 cuts, it was dredged to 10 feet at L.W.O.S.T. and provides berthing room alongside the inner end of the company's wharf for light draught boats, launches, scows, etc.

Public tenders were called for the above work, and on February 23, 1914, an Order in Council was passed awarding the contract to the Pacific Dredging Company of Vancouver, B.C., at 44 cents per cubic yard, place measurement. Dredging was started on April 1, and completed on May 16, day and night shifts being worked to expedite the operation and to take advantage of the high tides to work in the 10 foot cutting.

During the above period, 72,130 cubic yards, place measurement, of sand, silt, clay and cemented gravel were removed at a total cost of $32,042.25.

On May 14, additional dredging to the amount of 8,000 cubic yards, at the same rate per yard, was authorized, and arrangements were made with the Pacific Dredging Company to perform the work. This work constituted a fourth cut 98 feet wide, and roughly 400 feet long adjoining, and to the east of No. 3 cut. Clay and coarse gravel were removed to give 6 feet of water at L.W.O.S.T. This area is used as a log pond to feed pulp logs to the company's mill.

In all, 9,889·3 cubic yards, place measurement, were removed, of which, 8,000 yards were paid for by the department and the balance by the Powell River Company.

Work was started on June 30, and completed on July 27, at a total cost of $3,684.05, the cost of inspection being $164.05. The total dredging at Powell river, authorized and paid for by the department, amounted to 80,130 cubic yards, and the total cost to $35,726.30.

There is no reason why the dredged cuts should not stand up to the slopes dredged, or not maintain their depth for a long period of time, if the Powell River Company continue their efforts to divert the flow of water from the tail races of their mill away from the dredged areas.

### PRINCE RUPERT HARBOUR.

Plans were submitted by the Montana Continental Development Company of a wharf and ore bins to be built on the foreshore at this point. The site and plans were examined and report made to Ottawa recommending their approval.

An application was made by the Imperial Oil Company for the approval of plans of wharf on the foreshore in the city of Prince Rupert. The necessary examination and report were made and recommendation forwarded that these plans be approved.

The corporation of the city of Prince Rupert submitted plans for a wharf to be used for garbage disposal. They began construction however before filing plans, and after examination of site and wharf it was found that the work was completed and plans could not be approved.

A report was made on the request for approval of plans submitted by the city of Prince Rupert for the crossing of Shawatlans inlet by transmission cables from hydro-electric plant. A report was made on this matter and forwarded to Ottawa with the recommendation that the plans be approved.

PRITCHARD.

An appropriation of $5,300 was authorized for this service and the contract was let to Messrs. Beharrell & Mills, their price being $4,850. The contract called for a pile bent and timber decking structure with a level approach 336 feet long by 16 feet wide, a level turning block 40 feet by 60 feet with a 12 by 20-foot shelter shed and a sloping slip 66 feet long by 6 feet wide with a slope of 1 in 6 from deck level of the approach and turning block to 2 feet above low water mark. Work was commenced on October 5 and completed on November 11. The approach as built being 16 feet short of the specified length, a deduction of $82.62 was made from the contract price. The total expenditure is $4,894.58.

PROCTOR.

Repairs were made to dolphins and fender piles at a cost of $213.80.

PROCTOR NARROWS.

*Dredging.*

About one mile from the outlet of the main Kootenay lake, the west arm converges to form the Proctor narrows. At this point there was a current of approximately 8 to 9 miles per hour, and there existed dangerous cross currents, whirlpools and eddies, which made navigation extremely difficult, especially for the numerous launches, of which there are over 300 on Kootenay lake. On September 1, 1914, the departmental dredge *Bittern* began operations at this point, with the object of reducing this current to 4 or 5 miles per hour and to remove these dangerous whirls and eddies, and was still working on March 31, 1915.

During this time, a cut 880 feet in length and 150 feet in width, with a minimum depth of 10 feet at low water, was excavated. The material moved, sand and loose gravel, amounted to 37,200 cubic yards, place measurement, with an expansion factor of 15 per cent, or 41,470 cubic yards, scow measurement, handled by dump scow, at a total cost of $13,588.64.

This improvement is of a permanent nature and when completed will undoubtedly also have an effect on the high water stage in the vicinity of the narrows.

QUEEN'S BAY.

Diversion of creek from under wharf cost $56.

QUEEN CHARLOTTE CITY.

An examination was made of the departmental wharf at this point, which had become badly damaged by teredos, and a report forwarded to Ottawa. It was recommended that this wharf be repaired with creosoted piling at an estimated cost of $5,700.

QUEENSTOWN.

Queenstown or Port Clements is at the head of Massett inlet, Graham island, Queen Charlotte islands. The construction of a small landing float was authorized and the float was constructed at the above point and attached to the department's wharf at a cost of $249.09.

REVELSTOKE.

Repairs were made to the wharf by placing brush and rock mattress to stop scouring, and clearing driftwood from front of wharf at a cost of $1,100.

*Protection.*

Under authority granted during the year 1914-15, for bank protection work along the Columbia river at Revelstoke, work was started December 11, 1914, and was completed on January 20, 1915.

The work consists of brush and rock mattressing work, 785 feet in length, and varies in width from 32 feet to 65 feet.

The total cost of the work was $5,314.93.

RIVERSIDE.

*Dredging.*

Riverside is a ferry landing on the south bank of the Fraser river, directly opposite the Town of Mission. A Dominion Government wharf and a Provincial Government ferry provide transportation facilities at this point for the residents of Mission and Matsqui municipalities.

Owing to representations made by the settlers, it was asked that the berthing slip alongside the wharf and the approach thereto, which had become silted up by the action of the Fraser, be dredged to 8 feet at L.W.O.S.T. Authority being granted, the departmental hydraulic dredge *King Edward* performed this work in the interval March 29 to 31. Nine thousand one hundred and eighty cubic yards of silt and sand were removed from a cut having an approximate length and width of 525 feet and 49 feet respectively. The average depth of cutting was 9·6 feet. This high average for depth of face cutting resulted from the cutting into a 10-foot embankment at the lower end of the wharf to provide berthing room for scows.

The cut dredged should maintain a working depth for two or three years, depending on the height and duration of the freshets on the Fraser river. This work cost 11·44 cents per cubic yard or a total of $1,050.29.

ROBERTS CREEK.

Roberts Creek is a settlement on the mainland coast of British Columbia some 23 miles northwest of the City of Vancouver.

A post office, store, saw mill and converging government roads make this point a central one for the settlers within a radius of ten miles back and on either side of the creek. Coastwise steamers make daily calls at the wharf built.

On June 16, authority was granted to construct a wharf at the end of the Roberts Creek road. In lieu of a previous understanding with some of the interested settlers, whereby they were to construct a portion of the approach at their own expense, it was agreed that they should supply and deliver on the site of the work all of the necessary untreated fir piles. Seventy-five of these were supplied.

Timber and creosoted piles were bought in the open market and an agreement entered into with the Fraser River Pile Driving Company to supply plant and perform the work at unit prices of $6.20 each for driving piles and $16.25 per M for framing and placing timber.

The completed work consists of a 60-foot truss span at the shore end, an approach 646 by 14 feet and a pier head 60 by 40 feet. Work was performed in the interval September 7 to October 23, at a cost of $6,509.33.

ROCKY POINT.

The above work consisted of general repairs to the approach to wharf including replacing of piles which had been carried away by floating logs, by five solid masonry piers. The work commenced September 19 and was completed October 16, 1914. The amount expended was $326.20.

ROY.

Roy is a post office and receiving plant for freight, situated on Loughboro inlet, some 145 miles northwest of the City of Vancouver. The coast steamers make this place a regular point of call.

Authority being granted on June 16 to build a float for the use of the settlers in the vicinity of Roy, the work was put in hand by day labour on August 14.

The completed float is 50 feet long and 30 feet wide, connected with the shore by a floating approach 428 feet long and 4 feet wide. A storehouse 12 by 24, and the necessary anchorage was provided. The work was completed on September 17, at a cost of $999.47.

ROY'S BEACH.

The work consisted of the construction of a wharf 100 by 40 feet and a freight shed on wharf 20 by 14 feet and approach 1,230 feet by 16 feet. The work was commenced February 20, and was completed June 11, 1914.

The work was done under contract and the price was $6,300.

SAANICHTON.

The above work consisted of the construction of a wharf 90 by 40 feet, approach 101 by 14 feet, shed 30 by 18 feet, slip 25 by 9 feet, also float 35 by 20 feet, gangway 30 by 6 feet. The work commenced March 1 and was completed April 10, 1915. The total amount expended was $3,118.54.

SAFETY COVE.

The construction of a wharf at Safety cove, Calvert island, was authorized and this wharf, which is 40 by 60 feet with an approach 190 feet long, was constructed by day labour in a thorough and workmanlike manner at a cost of $4,300.43.

SALMON ARM.

An allotment of $2,000 was authorized for this service, and work was commenced on October 26. One hundred and twenty-six feet of level platform 16 feet wide was added to the inner end and preparations were made to add to the existing outer slope; the outer 16 feet slope was extended 28 feet on continuous grade with 14 feet of level platform at the outer end, in addition floor joists and worn planking were renewed in the existing dock. Work was completed on March 30, and the total expenditure incurred amounted to $1,930.76.

SALMON RIVER.

The above work consisted of supplying the material for the construction of a shed for use as a waiting room adjoining the wharf. The bulk of the lumber was supplied on August 21, 1914, and subsequently a small amount of lumber required was forwarded on January 11, 1915, the labour being undertaken by the settlers locally. The amount expended was $114.

SANDSPIT POINT.

A landing float for small gasoline boats having been authorized for Sandspit point, Morsby island, one of the Queen Charlotte islands, it was constructed at Digby island, Prince Rupert harbour, but owing to the heavy weather no tug could be found to tow it to Sandspit point. It is yet at Digby island and will be placed at an early date. Expenditure to date, $79.44.

SAVARY ISLAND.

Savary island is an island of summer homes, situated on the Malaspina straits, some 83 miles northwest of the City of Vancouver. A summer hotel also caters to transient tourist trade.

The wharf at Savary island was built during the fiscal year 1912-13. Owing to the remarkably destructive work of teredos, it was necessary the following year to to replace 53 worm-eaten piles with Australian hardwood piles. Authority was granted on June 16 last, to construct and place a landing float for the numerous gasoline boats using the wharf. This work was performed, under agreement by James McDonald & Company at unit prices of 50 cents per lineal foot for float logs, $35 each for creosoted piles and $30 per M. for timber, all in place.

The completed work consists of a float 16 by 26 feet with the necessary gangway, guide piles, protective boom logs and dolphins. An additional storehouse 10 by 18 was also built on the wharf pier-head. Construction was started on October 7 and completed on November 10, at a cost of $998.61.

SCARF.

The above work consisted of the construction of a wharf 80 by 40 feet and a freight shed on wharf 10 by 20 feet, approach 257 by 14 feet. Eighteen creosoted piles were used in the construction of the above wharf. The work commenced September 25 and was completed October 13, 1914. The amount expended was $4,177.41.

SICAMOUS.

A cut was put through the sand bar at the mouth of the Shuswap river, connecting the Mara and Shuswap lakes. The dimensions, by survey, are: length 990 feet, width 45 feet, with an average depth of face removed of 4½ feet. The total number of cubic yards of sand handled was 7,380, the cost being $1,147.86 or 15·5 cents per yard nearly. The channel was dug to a sub-grade of 5 feet below average low water to provide a clear 4 feet of depth. The work was effected between August 19, and September 24, of which time four days were occupied in moving the plant to and from Sicamous.

SKIDEGATE.

The departmental wharf having become badly damaged by teredos, an examination was made and report forwarded to Ottawa. It was recommended that the piling be replaced with creosoted material for which the sum of $6,800 was asked.

SOOKE HARBOUR.

The above work consisted of an extension 10 feet in width to the front face of the wharf, the renewal of a considerable portion of the piling in the old portion of the wharf and approach, 1,416 lineal feet of creosoted piling being included in the above. The slip was lengthened 10 feet in order to give an easier grade and a hand-rail was provided along both sides of the approach; a considerable portion of the decking, stringers and joists being renewed in the latter, the whole of the caps in the approach being replaced with new ones. The position of the shed was altered and a sliding door provided for same. The work commenced on February 9 and was completed March 20, 1915. The amount expended was $2,085.10.

*Landing Float.*

This work consisted of the construction of a float 20 by 20 feet, gangway 30½ by 5 feet with an approach on piles 86 feet long, at the end of Murray's road, Sooke, about one-half mile distant from Sooke wharf, giving access to the post office and the central portion of the village. The work commenced March 1 and was completed March 20, 1915. The amount expended was $408.63

SOUTH GABRIOLA ISLAND.

This work consisted of the construction of an addition at the end of the approach leading to the float forming a "T" 40 by 30 feet to enable wagons to turn, also a freight shed 18 by 15 feet. The work commenced July 23 and was completed August 31, 1914. The amount expended was $595.

SOUTH THOMPSON RIVER.

The departmental dredge *Pelican* is employed on the South Thompson river system, between the City of Kamloops and the Shuswap lakes, in a section of an extended waterway, navigable at ordinary stage from Savonas at the westerly end of Kamloops lake to all points on the Shuswap lakes and Mara lake, and for small craft up the Shuswap river as far as Enderby. The range between high and low water varies from 11 feet in the Shuswap lakes to 25 feet in Kamloops lake, but there is no certainty of average high water from year to year, variation in either direction depending on possible consistent differences from normal temperature during the season of rise. The principal towns along the waterway are Kamloops, an incorporated city of 5,000 inhabitants; Chase, a smaller town at the outlet of the Little Shuswap lake; Sicamous, which owes its importance not to its size, which is negligible, but to being the junction for the Canadian Pacific railway main line and Okanagan branch; and Salmon Arm, a rural municipality of about 1,000 inhabitants and a collecting centre for fruit shipments. All these towns are on the main line of the Canadian Pacific railway. Approximate distances between various points are as follows: Kamloops to Savonas, 25 miles, including 8 miles of Main Thompson river, and 17 miles of Kamloops lake; Kamloops to Chase, 36 miles, all on the South Thompson river; from Chase to the narrows of the Big Shuswap lake between Seymour and Anstey arms, 34 miles, of which 4 miles is over the Little Shuswap lake, 3 miles of the Little river, and 27 miles of the Big Shuswap lake; these so-called narrows are 1,750 feet wide, with no less than 60 feet of water in the channel. Seymour, a new settlement at the head of Seymour arm, is 14 miles and, the head of Anstey arm is 9 miles from the Narrows. From the Narrows to Sicamous, near the outlet of Mara lake, is 11 miles, and this point is 45 miles and 81 miles from Chase and Kamloops respectively. Salmon arm is 16½ miles from Sicamous and 97½ miles from Kamloops, by water. Mud lake, at the head of Mara lake, is 8 miles from Sicamous which distance includes 1 mile of the Shuswap river, connecting the Mara and Big Shuswap lakes. From Mud lake to Enderby, by the winding narrow Shuswap river, is 15 miles. Thus between Savonas and Mud lake there are 114 miles of navigable waters.

Dredging has been performed in the Little river and the South Thompson river at various times and places with a view of at first rapidly opening the river for light draught boats at less than middle stage, and this end accomplished, work has been continued in the same and other places to enlarge and deepen the temporary channel and to improve the whole distance both as regards current and depth, which latter it is intended to increase to a minimum of 4 feet at low water. It was principally on this second programme that the *Pelican* was employed during the past fiscal year.

On April 1, work was commenced in the cut in the Little river, near Squilax, and was continued till May 31, when the water had risen sufficiently to necessitate closing down and the dredge was moved to Chase and underwent general repairs. By July 1, the water had fallen sufficiently to allow dredging to be resumed and the *Pelican* was towed back to Squilax and the cut continued until August 19, when the dredge was towed to Sicamous, where the work was completed on September 24, and the *Pelican* was towed back to Squilax and continued the interrupted cut there, finishing on October 17. The final dimensions of this cut, by survey, were: length, 1,000 feet; width, 100 feet; average depth of face removed, 4½ feet; the channel was

dug to subgrade 6 feet below average low water to give a clear depth of 5 feet. The total number of cubic yards of gravel handled was 38,437, the cost being $3,411.90, or 8·87 cents per yard nearly.

SPILLER RIVER.

The wharf at Spiller river had become so damaged in January of this year that when the expenditure was authorized it was practically falling down. The money available was expended to the extent of $999.28 in bracing the wharf so that it will stand until a further appropriation, which has been asked for for 1915, is authorized, when repairs may be completed in a thorough manner.

*Landing Float.*

A landing float for gasoline boats having been authorized, it was constructed at Dodge cove, Digby island, and towed to the department's wharf at Spiller river and placed in a proper position. Total cost of construction and placing was $248.63.

STEAMBOAT BAY.

Work was done by day labour and consists of a pile bent and timber decking structure, a level approach 28 feet long by 32 feet wide with a shelter shed 12 feet by 20 feet, and an incline 140 feet long by 32 wide on a slope of 1 in 12¾, nearly, falling from deck level of the platform to 2 feet above low water mark. Work was commenced on December 17 and completed on January 22. An expenditure of $2,710.34 was incurred on this service.

STEVESTON.

The Town of Steveston is situated on Lulu island at the mouth of the Fraser river. It has a population of 1,000 and is the chief centre of the salmon fishing and canning industry of British Columbia.

Authority was received on June 16 to carry out repairs and to make additions to the existing public wharf.

The work was done by day labour with the departmental pile driving plant.

Between July 2 and 27, the existing wharf was raised 17 inches to conform to the height of adjoining wharfs, an addition, 170 feet long and an average width of 20 feet, was built, and general repairs carried out on the old structure at a total cost of $1,598.62.

*Jetties.*

The work undertaken at the mouth of the main branch of the Fraser river has for its object the confining or training of the waters to a defined channel which is being dredged parallel to the training piers. The projected jetty on the north side of the channel is 27,000 feet long. Of the total length, there was completed in April the first unit, or 6,900 lineal feet.

The work done during the fiscal year 1914-15, consisted in completing the first unit under contract to Messrs. Broley and Martin.

There being no contract let, there was no expenditure made on the second unit of the jetty.

The expenditure during the fiscal year 1914-15 was $30,124.45.

STEWART.

The departmental wharf at Stewart was found in January of last year to be in a very bad condition as the result of the action of teredos. At that time, there were fifty piles gone, and the wharf collapsed over these piles. The money to repair this was not available until June and by that time there were thirty-three more piles gone

making eighty-three piles in all to be replaced. The work was completed in July last at a cost of $3,500.44.

STIKINE RIVER.

This work consists of the removal of snags and other obstructions to navigation in the Stikiue river. The work was undertaken in August and continued through September and October, with the result that some forty miles of that stream was cleared in such a manner that it is quite possible for boats of shallow draft to navigate freely. The work as far as it was possible to do it was very satisfactory, but as the season closes down very early and ice forms in the river it was not possible to complete it. The expenditure to date was $8,870.22, leaving enough, if the renewals asked for are granted, to begin work on the removal of rocks at Buck's bar and Glenora rapids when the river opens in the spring.

SURF INLET.

The department's wharf at Surf inlet being badly damaged by the action of teredos, was torn down and rebuilt at a cost of $2,987.48. A landing float for gasoline boats having been authorized, it was built at Dodge cove, Digby island, and was towed to Surf inlet and placed in position at the department's wharf. The total cost of the construction and placing was $299.88.

SYRINGA CREEK.

Syringa Creek is a farming settlement at the south end of the Lower Arrow lake, with a population of about 75.

During the year 1914-15, authority was granted for the construction of a wharf and the work was started December 2, 1914, and completed January 27, 1915.

The structure is a floating wharf, 24 by 40 feet, with an approach 8 feet by 20 feet, and it is moved up and down the beach by two $\frac{3}{4}$-inch cables attached to winches, as the water rises and falls.

The total cost of the work was $1,468.73.

TAMBOLINE SLOUGH (WESTHAM ISLAND).

*Dredging.*

Tamboline slough is a narrow strip of tidal water traversing the entire width of Westham island, a distance of some $1\frac{1}{2}$ miles.

As a result of representations made by the municipality of Delta, in which Westham island is situated, it was recommended that the southerly end of the slough for a distance of 2,000 feet be dredged to allow small freight boats to run up the slough to collect grain, hay and other produce grown by the farmers.

On their own responsibility, the Navigation Dredging Company of Vancouver moved their dredge *P.D.C. No. 4* from their sandheads contract to Tamboline slough on April 25. Operations were commenced on April 27, and continued until May 30. On June 10, the Honourable the Minister of Public Works ordered the work stopped, and no further dredging was done during the year.

During the above period, a cut 1,050 feet long, and 80 feet wide, leading from Canoe pass, was dredged to 7 feet at L.W.O.S.T.; this depth is not being maintained, as the material overcast on either bank dries out and is blown into the cut by the high winds prevailing over the sandheads.

There was removed from the cut and overcasted 19,478 cubic yards of silt and sand, place measurement; an estimate for this yardage at 19 cents per yard, amounting to $3,700.82.

The complete scheme for the improvement of Tamboline slough involves the continuation of the cut made to a point 1,950 feet further up the slough, where it meets a highway bridge. It is proposed to pump the material dredged from this proposed

cut into the slough above the bridge, making a bulkhead of the wasted material over which the highway can be connected up.

THOMPSON RIVER—REMOVAL OF SNAGS.

An appropriation of $2,500 was authorized for this service. Work was commenced on March 3, and consisted of blasting and removing boulders and rocks from the navigable channel between Chase and Kamloops. A sum of $627.40 was expended and the work was completed on March 31.

TOD INLET.

*Dredging.*

The object of the dredging performed at Tod inlet is to allow steamers drawing 18 feet to lie alongside the easterly side of the loading wharf and the southerly side of the loading and gypsum wharfs at all stages of the tide, dredging being carried out to 18 feet at low water, except at the southwesterly corner of the loading wharf, where old piles were encountered which could not be removed, also in the mooring basin on the easterly side of the loading wharf, owing to hardened cement being encountered it was not found possible to dredge to 18 feet, the dredging done in this area, however, is quite satisfactory to the Vancouver Portland Cement Company, who applied for the above work to be undertaken.

The work of dredging a mooring basin 360 feet long by 60 wide on the southerly side of the loading and gypsum wharfs was carried out December 8 to December 18 by the departmental dredge *Victoria*, en route to Nanaimo, the dredging of a mooring basin 180 feet long by 30 wide on the easterly side of the loading wharf being carried out, March 13 to March 29, by the same dredge on her return journey.

The total cost of the above work to the department was $981.08, being at the rate of 26·8 cents per cubic yard, 3,660 cubic yards of sand and packed clay being removed.

TOFINO.

The above work consisted of an addition of 20 feet to the southern end of the wharf, with a float 20 feet by 20 feet, and gangway 31 feet by 4 feet leading from same. Thirty feet of the old portion of the wharf at the northerly end being dilapidated and beyond repair, and no penetration for piles being available, was removed. Six fender piles, four brace piles and six bearing piles were replaced in the old portion of the wharf.

Amount expended was $1,289.40.

UCLUELET WHARF.

The shed at this wharf was fitted with a door at a cost of $12.54.

UNION BAY.

The above work consisted of general improvements and repairs to wharf, including addition to freight shed 18 by 24 feet, repairs to old shed, new float 18 by 33½, with gangway 32 by 4 feet, alteration to grade of existing slip and replacing 5 piles. The work was commenced on September 22, and was completed December 20, 1914. The amount expended was $939.28.

UPPER DUNCAN RIVER.

The Upper Duncan river, from Howser lake to Healy's landing, a distance of 25 miles, forms the only means of communication into the Duncan river mining district.

It is navigable for launches and small steamers from about May until October, but as no improvement work had been done on it for many years, the channel was badly obstructed with snags and sweepers and overhanging trees and brush.

Under authority granted during the year 1914-15, for the improvement of this river, work was commenced September 7, and completed on November 21, 1914.

This river is now in good condition for navigation by small boats, and a small annual expenditure would keep it in good order for safe navigation.

### UPPER FRASER RIVER.

Improvements were executed by the removal of certain rocks and points of reef in front of Fort George Canyon. A sum of $4,683.62 was expended on Fort George Canyon and the work has been completed.

### STUART AND TACHI RIVERS.

Operations were commenced on September 10. In the Stuart River canyon, reef rocks were removed by drilling and blasting. On the lower reaches of the Stuart river many loose rocks were blasted and removed from the channel between LeBras creek and the head of the Chinlac rapids. On the Tachi river, loose, heavy rocks and boulders were removed or broken up by blasting in several locations. Work on this service was discontinued on March 31, and the expenditure incurred amounts to $17,549.15.

### VAN ANDA.

Van Anda is situated on the easterly coast of Texada island, some 70 miles northwest of the City of Vancouver. The town is the commercial centre of the island and is surrounded by mining properties, one or two of which ship out a considerable quantity of copper ore.

On May 7, authority was granted to carry out repairs to the existing wharf in the harbour. This work was performed, under agreement, by James McDonald & Company, at unit prices of $18 and $15 each respectively, for hardwood and fir piles, and $30 per M. for timber, both in place. The hardwood piles were supplied to the company from Department of Public Works stock at New Westminster.

Investigation showed that the old structure was so badly teredo eaten and rotted that an entire new wharf would have to be constructed. In the interval October 27 to November 19 the old wharf was torn down and a new pierhead 100 by 85 feet, and an approach thereto 240 feet long and 16 feet wide was built on the old site at a cost of $4,799.94.

### VANCOUVER.

#### *Dredging.*

Vancouver city, situated on the western coast of the Dominion, has a population of 110,000. The harbour consists of a large body of sheltered seaway, known in its different parts as English bay, Burrard inlet and False creek.

Vancouver being a western terminus of several railways, extensive shipping is carried on with the Orient. It is also expected that considerable freight will be shipped to Europe and Eastern American ports via the Panama canal.

*First Narrows.*—The entrance to Burrard inlet from the sea is through a contracted channel known as the First narrows. This channel is of varying width, the least being opposite Prospect point, where it was originally 450 feet between 30 foot contours. The work being prosecuted at the present time has for its object the widening of this channel to 1,200 feet and deepening it to 35 feet at L.W.O.S.T. This work is being performed by the departmental ladder dredge *Mastodon,* working day and night shifts.

The following table gives the dates between which the dredge was actually digging and the yardage removed, the intervals being periods during which the dredge was laid up for repairs or alterations.

DREDGE *Mastodon.*

| Dates between which work was performed. | Cubic yards, scow measurement. | Materials. | Location. |
|---|---|---|---|
| May 18 to Sept. 10 .... ..... | 435,500 | Coarse gravel ..... | First Narrows. |
| Oct. 14 to Jan. 29..... | 340,340 | " ..... | Vancouver harbour. |
| Feb. 10 to Mar. 31..... | 146,640 | Sand and gravel..... | |
| Total ..... | 922,480 | | |

The position of the dredge was changed from the outside to the inside end of the cut and vice versa to accommodate the work to some pipe-laying done by the City of Vancouver. Latterly, the dredge was moved into softer material at the easterly end of the cuts so less strain would be put on the ladder buckets which were weakening.

During the year, an area of approximately 650,000 square feet was dredged over to a depth of 35 feet at low water, the average depth of cutting being 33 feet.

The above yardage is scow measurement. Place measurement would approximate 15 per cent less than this quantity, or 784,108 cubic yards.

The complete scheme for the improvement of the First narrows was reported on December 1, 1909, when the estimated yardage was placed at 2,153,522 cubic yards, place measurement, and including 68,900 cubic yards to be taken from Parthia shoal, in the centre of the eastern end of the channel. This estimate was based on a widening of the original channel to 1,200 feet, and to a depth of 30 feet L.W.O.S.T. On October 4, 1913, it was recommended that the dredging be carried to 35 feet at L.W.O.S.T. This work involving the removal of an additional 371,000 cubic yards was authorized, and is now being carried out. Work, supplementary to the above, and involving the removal of 160,062 cubic yards, from a cut 200 feet wide and 2,125 feet long, was authorized, and reported on March 12, 1915.

The work at the narrows authorized to date, totals 2,684,584 cubic yards, place measurement. Using an expansion factor of 15 per cent the total scow measurement would be 3,087,271 cubic yards; of this quantity there was removed to March 31, 1914, 1,378,500 cubic yards. The 922,480 cubic yards removed during the fiscal year 1914-15, added to the above makes a total of 2,300,900 cubic yards, or 74·5 per cent of the whole. Based on the unit cost of 16·49 cents per cubic yard, the total cost of the work performed at the narrows for the fiscal year was $152,134.50.

*False Creek.*

The work being done in False creek has for its object the utilizing, as an additional harbour, of a long, narrow, shallow basin of tidal water running from English bay to the centre of the city. This work necessitates the deepening of a channel some 13,600 feet long and 350 feet wide to 20 feet at L.W.O.S.T. from grade in English bay to a point at or near the Great Northern railway bridge crossing False creek, together with a dredged cut some 2,400 feet long and having an average width of 188 feet, the latter running northerly from the inner end of the main channel and having a depth of 12 feet below L.W.O.S.T.

On March 3, 1913, a contract was awarded to the Pacific Dredging Company of Vancouver, B.C., to remove 3,300,000 cubic yards of various materials at a flat rate of twenty-one cents per cubic yard, place measurement. A revised estimate based on a close survey and reported on October 15, 1914, reduced this estimated quantity to 3,077,753 cubic yards.

During the fiscal year 1913-14, 970,183 cubic yards were removed.

During the fiscal year 1914-15, 876,098 cubic yards were removed at a total cost of $197,524.41; $13,543.83 of this amount was incurred for supervision and inspection.

The work performed between April 1, 1914, and March 31, 1915, embraces three areas dredged to different depths.

A cut on the outer or westerly end having an average length of 1,000 feet and width of 350 feet was dredged to grade or 20 feet at L.W.O.S.T, area, 350,000 square feet.

A cut, in continuation of the above, eastwards, having an average length of 2,475 feet and an average width of 180 feet, was dredged to 14 feet at L.W.O.S.T., except for a small area, 59,500 square feet, which was dredged to grade. Area of dredging to 14 feet, 386,000 square feet.

A cut, from a point near the Connaught bridge, westwards, 1,500 feet long and 150 feet wide, was dredged to an average depth of 19 feet at L.W.O.S.T. Owing to hard material being encountered, this cut was left to be cleaned up to grade with a heavier dredge. Area of dredging to 19 feet, 225,000 square feet.

Total area dredged over during the year, 1,020,500 square feet.

On March 20, instructions were received to shift the centre line of the projected channel, between the Granville street and Connaught bridges, to the north some 350 feet to flatten the curve over this stretch. The new locations, while shortening the channel some 385 feet, involve the removal of approximately 40,000 additional cubic yards of materials.

*Wharf.*

Early in 1913, tenders were called for the construction of a timber crib and concrete wharf, to be built on a site procured by the Government on Burrard Inlet, at the foot of Salisbury drive. On August 25, 1913, an Order in Council was passed awarding the contract to Messrs. Henry, McFee & McDonald, of Vancouver, at unit prices aggregating $1,249,030.75.

Work was commenced on October 1, 1913, and is being continued to date. During the fiscal year 1913-14, 78,213 cubic yards of excavated materials were removed from the wharf site, and other work, preliminary to actual construction of the cribs, was performed.

During the fiscal year 1914-15, 222,574 cubic yards of materials were dredged and removed from the site and 32,014 cubic yards blasted but not yet removed. Nine cribs, eight 40 by 100 feet, and one 30 by 70 feet, were constructed and placed, and six were built and launched. There remains to be built eight cribs and the concrete superstructure of the wharf, together with the necessary filling between bulkheads.

The expenditure during the fiscal year 1914-15 was $915,432.98.

CAPILANO DAMS.

The Capilano is a mountain stream having its source in the Howe Sound mountains. It flows in a southwesterly direction, and enters the first narrows of Burrard inlet through three distinct branches. Owing to the high elevation of its source and the precipitous nature of its course down the mountains, the freshets are sudden and destructive.

The work done at the mouth of the river will control the freshets, by confining and diverting the flood water into the west channel, as the east branch empties into the first narrows, where dredging operations are being carried on.

The work of improving the river was in hand at the beginning of the fiscal year, and was carried on continuously to March 31, when it was completed, at a cost of $16,586.13.

The completed work consists of three loose rock and riprap submerged dykes, which confine the main body of the water to the desired channel, but are built low enough to allow of flood waters being checked and carried off farther down the stream. The rock for this work was taken from the bed of the west branch of the river, thus deepening it.

### VARGAS ISLAND.

The above work consisted of the construction of a wharf having a frontage of 78½ feet, approach 162 by 15 feet, and a freight shed 12 by 12 feet. The work was commenced on November 16, 1914, and was completed on February 20, 1915. The amount expended was $3,164.60.

### VEVEY.

Vevey is the shipping point for a number of mining properties on Slocan lake, and is situated on the east side of the lake, about 8 miles from Slocan city. The mines tributary to this place employ between 150 and 200 men under ordinary conditions.

During the season 1914-15, authority was granted for the construction of a wharf, and work was commenced November 25, and completed December 18, 1914.

The wharf is a pile and timber structure, 32 feet in width and 83·6 feet in length, on a grade of 1 in 8.

The total cost of the work was $2,151.41.

### VICTORIA.

#### *Breakwater.*

The breakwater at Ogden Point, placed under contract with Sir John Jackson on December 20, 1912, to be 2,500 feet long is nearing completion.

During the past fiscal year, all the core stone has been placed, 241·925 tons being put in the work; the rubble mound is practically complete for its whole length up to the point where the granite blocks begin, elevation 20, and rubble has been dumped behind the granite blocks as far as laid for a distance of 600 feet to elevation 0, also deposited at the back of the concrete up to elevation 11 for a distance of 275 feet; granite blocks have been laid up to E.L.W.L. for a distance of 600 feet, and above E.L.W.L. for a distance of 275 feet; the concrete mound is complete up to elevation 21 for a distance of 513 feet.

#### *Piers.*

The rubble mound is complete excepting the part where excavation will be necessary, 334·510 tons of stone have been deposited; broken stone has been deposited over the rubble for a distance of 900 feet, the quantity of stone being 1,617 cubic yards. Two of the cribs have been placed in permanent position, and the work is progressing satisfactorily.

*Old Custom House Wharf.*

The work consisted of renewing a portion of the decking of the above wharf. The work commenced October 22 and was completed October 24, 1914. The amount expended for the lumber was $90.50, the labour being undertaken by departmental employees.

*Dredging.*

The object of the dredging improvements undertaken in the above harbour during the past year has been the removal of rock at Shoal point to improve the entrance to the harbour, the improvement of the channel to James bay especially by the removal of rock in the vicinity of Pelly island and Songhees point and a considerable addition to the navigable area towards the E. & N. Railway bridge opposite the proposed Songhees wall and the upper harbour. The following plant has assisted in the work done; dipper dredges *Ajax* and *Mudlark*, orange pell dredge *Victoria*, Lobnitz rock *Breaker No. 1* and rock drill plants *Nos. 1* and *2*.

The result of the year's work as compared with that of the previous year, during which the extra dredges *Mastodon* and *Skookum* assisted, may be considered as satisfactory, as the departmental dredges have also worked during the past year at the quarantine station (William Head), Nanaimo, Tod inlet and Royal bay, and during the past year, the *Ajax* has been mainly engaged on the removal of rock excavated, (and the silt rendered accessible thereby) by the two drill plants and the Lobnitz rock breaker from Shoal point to Songhees point, a total of 38,705 cubic yards of rock having been removed during the season as compared with 33,588 cubic yards removed in 1913-14. As a result of this work, the spar buoy of Shoal point has been removed 120 feet in a northeasterly direction giving much needed additional width for the safer navigation of this the worst point in the harbour where vessels entering and leaving have to make a right angle turn in very close quarters.

The work at Shoal point being exposed to southeast and southwest winds has been considerably delayed by storms, also by the evident inability of drill plant No. 2, the only one of the two plants available for the work done, to do its work thoroughly.

Considerable improvement has been made in straightening out the channel of Pelly island, the greater part of the rock removed during the season having been taken from the three rocks abutting the channel line in this vicinity. The final removal of the above rocks will effect a great improvement in the navigation of the harbour. Owing to the large area of rock to be dealt with at this point, the removal of the same to the channel line is, of necessity a matter of time. One hundred and sixty-two thousand one hundred and nineteen cubic yards of clay, hardpan and silt have been removed in improving the channel between the entrance to Laurel point. Opposite the proposed Songhees wall the almost complete removal of Beaver rocks 1 and 2, and the removal of a large bank of silt containing 69,330 cubic yards has given a considerable widening of the channel varying from 100 to 200 feet towards the E. and N. Railway bridge.

The dredge *Mudlark* has worked almost continuously in the upper harbour where great improvements have been made (191,550 cubic yards of clay and silt being removed).

Comparatively few rocks being encountered, the work of this dredge has proceeded without interruption. As a result of this work, safe navigation of the upper harbour is now possible, the removal of Turpel rock not being as urgently required as that of rocks in other parts of the harbour. A large addition to the 20-foot navigable area has been made in the vicinity of the Canadian Puget Sound Lumber Company's wharf and in the channel leading to Point Ellice bridge and on the westerly side of the upper harbour. 21,660 cubic yards of hardpan were removed off the outer wharfs

by dredge *Ajax* to provide a turning basin (30 feet at low water) for vessels out bound. The nature of the material removed in the harbour consisted generally of rock (some being of an extremely hard nature), hardpan, clay and silt. The dredge *Victoria* excavated to low water level a channel 30 feet wide alongside the wharf of the Brackman-Ker Milling Company, removing 610 cubic yards of sand. The total quantities of material removed during the season were 483,974 cubic yards, scow measurement, during which no contract work has been carried out. Dredging being carried out to a depth of 20 feet at low water (plus 1 foot additional sub-grade).

The work of first importance during 1915-16, is the further removal of rock at Platform and Princess rocks near Pelly island and Songhees rock No. 2 and further improvements at Shoal point.

Summary of material removed from Victoria harbour during the year.

| — | Cubic yards, rock. | Total cubic yards. |
|---|---|---|
| Removed at Shoal point | 2,935 | |
| Removed north side of channel in vicinity of Pelly island and Songhees point | 34,661 | |
| Removed south side of channel at Laurel point | 1,109 | |
| | | 38,705 |
| | Hardpan, clay and silt | |
| Improvements and widening of channel between entrance to harbour and Laurel point | 162,119 | |
| Widening of channel between Songhees point and E. & N. Railway bridge | 69,330 | |
| Improvements to, and increase of, navigable area in upper harbour north of E. & N. bridge | 191,550 | |
| Provision for turning basin off outer wharfs to 30 feet below L. W. L. (not completed) | 21,660 | |
| Mooring basin at the Brackman-Ker Milling Company's wharf | 610 | |
| | | 445,269 |
| Total excavation during the year (scow measurement) | | 483,974 |

The total cost of operation of the work carried out during the year, including inspection and the cost of the dredging carried out at the quarantine station, William Head and at Royal Bay, is $264,991.29, being at the rate of 54·7 cents for all classes of material removed.

### WHALETOWN.

Whaletown is a small settlement on the southerly coast of Cortez island some 108 miles northwest of the City of Vancouver. A post office, store and the natural harbour make it a supply and shipping centre for settlers on the southerly half of the island. The harbour is also used as a place of refuge by boats caught in the sound by southeast storms.

Authority was granted on June 16, to tear down the old provincial government wharf in the harbour and replace it with a larger and more stable structure. This work was performed, under agreement, by James McDonald & Company at unit prices of $22 and $15 each, respectively, for hardwood and fir piles, and $30 per M. for timber, both in place. The Australian greenwood piles were delivered to the company from D.P.W. stock at New Westminster. Work was commenced on September 14 and completed on the 29th, at a cost of $2,494.16.

WHITE ROCK.

White Rock is a town situated on the Gulf of Georgia, one mile north of the international boundary line, and on the line of the Great Northern railway. The town is of importance as being a headquarters for customs and immigration staffs and as a summer resort. Boats proceeding to and from United States ports call at White Rock for clearance.

Authority was granted on July 2, to proceed with the construction of a wharf and $5,000 of the estimated cost of $15,000 was made available for this purpose.

Of the complete projected wharf, there was constructed 628 lineal feet of approach 20 feet wide, with a small boat landing float 20 by 40 feet at the outer end. This float can be used by small boats at 8 feet of tide. There remains to be built 1,022 lineal feet of approach and a pier head 40 by 70 feet.

The above work was performed, under agreement, by the Fraser River Pile Driving Company at unit prices of $7.10 and $17 each, respectively, for untreated and creosoted piles and $28.75 per M. for timber, both in place. Construction was carried out between July 5 and August 5, at a cost of $4,960.32.

WILLIAMS HEAD QUARANTINE STATION.

The work consisted of road making and general repairs to roads, wharf, water mains, bridges, also re-sheathing piles, cleaning ditches, etc. The work commenced June 25, and was completed December 9, 1914. The amount expended was $2,998.69.

*Dredging.*

The object of the dredging performed was to allow ships to lie alongside the wharf while in quarantine; a channel 80 feet wide dredged to 28 feet below low water being provided. The nature of the material removed consisted of sand and soft clay.

The work was carried out by the departmental dredge *Ajax,* which worked from June 4 to 8, 1914, removing 4,920 cubic yards, scow measurement, including 960 yards (one night's work) dredged at the coal wharf as authorized June 9, 1914.

On the completion of the above work, the dredge *Ajax* proceeded to Royal bay to carry out certain dredging required by Messrs. Lineham & Sargison, to whom the dredge was rented, for the purpose of making an approach to their gravel grounds in section 55, in the Esquimalt Royal roads. The dredge worked from June 9 to 15 and June 24 to 30, removing 38,760 cubic yards, scow measurement, of sand.

WILLOW POINT.

Shed was built on the wharf at a cost of $196.49.

YELLOW POINT.

This work consisted of the construction of a wharf 60 by 40 feet, approach 211 by 14 feet, float 30 by 20 feet, and gangway 30 by 4 feet, also freight shed on wharf 9 by 20 feet. The work commenced September 14, and was completed November 18, 1914. The amount expended was $3,500.

## DREDGING OPERATIONS.

The detail description of work done by the different dredges will be found under the name of the place, in the body of the report.

Where dredging is described and classified as "A" or "B," the explanation is:—

Class A.—Solid rock requiring drilling and blasting, and boulders containing two cubic yards or more.

Class B.—Loose or shale rock, silt, sand, quicksand, mud, shingle, gravel, clay, clay and sand, gumbo, boulders, hardpan, or material of any kind whatsoever except that specified under class A.

The following tables cover the work done by each particular government dredge:—

# NEW BRUNSWICK.

## DREDGE, P.W.D. No. 1 ("W. S. FIELDING") PROVINCE OF NEW BRUNSWICK.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 12,000 | 48,600 | 46,800 | 52,800 | 35,675 | 24,993 | 36,973 | 17,418 | | | 275,259 |
| Class of material | | | Sand & mud | Sand & mud | Sand & mud | Sand | Mud | Mud | Mud | Sand & mud | | | |
| Total possible dredging time...hrs | | | 60 00 | 270 00 | 260 00 | 260 00 | 270 00 | 250 00 | 270 00 | 140 00 | | | 1,780 00 |
| Total time lost...hrs | | | 40 00 | 187 55 | 176 00 | 199 35 | 209 00 | 206 50 | 111 20 | 28 40 | | | 1,313 35 |
| Hours actually dredging | | | 20 00 | 82 05 | 84 00 | 70 25 | 41 00 | 63 10 | 28 40 | | | | 466 25 |
| C.yds. handled per hour | | | 600·00 | 592·09 | 607·16 | 628·57 | 566·60 | 609·51 | 585·30 | 607·54 | | | 590·153 |

### Details of Expenditure by Months.

| Items of Expense | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 815 40 | 1,249 58 | 1,964 82 | 2,240 19 | 1,984 63 | 2,104 64 | 2,060 11 | 1,158 14 | | | 13,577 51 |
| Fuel, Coal and Oil | | | | 492 89 | 1,711 18 | 1,104 18 | 323 49 | 1,213 84 | 1,168 75 | 120 01 | | | 6,194 34 |
| Water | | | | 166 50 | 10 50 | | 180 45 | | | 188 53 | | | 545 98 |
| Subsistence | | 4 00 | 271 60 | 446 34 | 641 85 | 551 35 | 571 04 | 610 04 | 598 54 | 409 77 | | | 4,134 54 |
| Wharfage | | | | 423 00 | 855 00 | 405 20 | 366 00 | 366 00 | 366 00 | 366 00 | | | 3,147 20 |
| Pilotage | | | 40 00 | 205 00 | 130 00 | 130 00 | 135 00 | 125 00 | 135 00 | 90 00 | | | 990 00 |
| Stores (Machinery | 361 55 | 10 75 | 36 50 | 387 28 | 850 78 | 308 60 | 146 92 | 667 85 | 529 08 | 468 68 | | | 3,767 99 |
| Stores (General | 54 51 | | 8 97 | | 41 25 | 70 40 | 44 33 | 21 98 | 10 70 | 1 10 | | | 253 27 |
| Repairs (Material | 14,114 78 | 1,006 61 | 2,400 84 | 871 54 | 458 00 | 470 39 | 568 64 | 4,195 37 | 349 71 | 1,321 74 | 1,896 83 | 19,008 52 | 46,663 03 |
| Repairs (Wages | 2,108 50 | 2,301 62 | 955 07 | 132 00 | | | | 79 45 | 120 76 | 1,233 46 | 1,941 50 | 1,937 22 | 10,809 58 |
| Rental of tugs | | | | 287 00 | 1,096 00 | 880 00 | 400 00 | 1,000 00 | 1,040 00 | 080 00 | | | 5,383 00 |
| Contingencies | | 12 80 | 22 50 | 2 03 | 19 87 | | | | 2 00 | 21 83 | | 7 13 | 88 16 |
| Total Expenses | 16,639 37 | 3,335 78 | 4,550 88 | 4,663 16 | 7,779 32 | 6,220 31 | 4,720 50 | 10,414 17 | 6,380 65 | 6,059 26 | 3,838 33 | 20,952 87 | 95,554 60 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| Tug *Helena* | April 1 | June 26 | St. John, N.B | 17,340 80 |
| | July 30 | Mar. 31 | | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts |
| Steamer *Mildred* | Mar. 14 | | St. John, N.B | 5 00 |
| Tug *Nereid* | May 18 | May 20 | " | 12 00 |
| " | June 4 | | " | 7 00 |
| " | " 23 | Aug. 26 | Channel, St. John, N.B | 3,829 25 |
| " | Dec. 18 | Jan. 21 | " " | |
| " | Oct. 21 | Dec. 17 | Winter Port Berths, N.B | 1,490 75 |
| Tug *Lillie* | July 3 &22 | | | |
| | Aug. 25 | | Channel, N.B | 56 00 |
| | | | | 5,400 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
| Channel, St. John, N.B | 9,817 35 | 4,478 82 | 391 75 | 2,989 47 | 2,275 64 | 715 84 | 2,724 47 | 183 13 | 33,740 85 | 7,816 13 | 3,892 25 | 64 06 | 69,092 76 |
| Winter Port Berths, N.B | 3,760 16 | 1,715 52 | 151 23 | 1,145 07 | 871 56 | 274 16 | 1,043 55 | 70 14 | 12,922 18 | 2,993 45 | 1,490 75 | 24 10 | 26,461 84 |
| Totals | 13,577 51 | 6,194 34 | 545 98 | 4,134 54 | 3,147 20 | 990 00 | 3,767 99 | 253 27 | 46,663 03 | 10,809 58 | 5,383 00 | 88 16 | 95,554 60 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Channel St. John, N.B | June 23 | Oct. 15 | Sand and mud | 209,122 | 1,170 | 337–15 | 204·87 | ·3303 |
| Winter Port Berths, N.B | Dec. 18 | Jan. 16 | | | | | | |
| | Oct. 22 | Dec. 17 | Mud | 66,137 | 600 | 129–10 | 204·87 | ·4001 |
| Totals | | | | 275,259 | 1,770 | 466–25 | 204·87 | ·3471 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Channel, St. John, N.B | 55 35 | 208 50 | 136 35 | 31 20 | 190 40 | 40 00 | 21 20 | ..... | 26 40 | 29 05 | ..... |
| Winter Port Berths, N.B | 120 55 | 70 20 | 107 20 | ..... | 47 30 | 10 00 | 58 40 | ..... | 27 20 | 17 25 | ..... |
| Totals, hours | 206 30 | 279 10 | 233 55 | 31 20 | 238 10 | 50 00 | 80 00 | ..... | 54 00 | 46 30 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Channel St. John, N.B | 5 00 | ..... | ..... | ..... | 77 40 | 842 45 | |
| Winter Port Berths, N.B | 3 00 | ..... | ..... | ..... | 8 20 | 470 50 | |
| Totals, hours | 8 00 | ..... | ..... | ..... | 86 00 | 1,313 35 | |

General Remarks: Dredge put into commission at St. John, N.B., on June 19; laid up for season at St. John, N.B., on January 21, 1915.

## DREDGE, P.W.D. No. 2 ("ST. LAWRENCE"), PROVINCE OF NEW BRUNSWICK.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 1,200 | 11,600 | 14,800 | 17,000 | 22,800 | 8,600 | | | | | 76,000 |
| Class of material | | | Sand, stone, logs, gravel | Sand, stones | Sticks, sand mud. | Gravel, sand | Sand, sticks | Logs, sand | | | | | |
| Total possible dredging time hrs | | | 40 00 | 270 00 | 260 00 | 260 00 | 270 00 | 100 00 | | | | | 1,200 00 |
| Total time lost hrs | | | 17 00 | 131 00 | 104 00 | 118 00 | 86 00 | 29 30 | | | | | 485 30 |
| Hours actually dredging | | | 23 00 | 139 00 | 156 00 | 142 00 | 184 00 | 70 30 | | | | | 714 30 |
| C.yds. handled per hour | | | 62 17 | 83 45 | 94 88 | 119 72 | 123 91 | 121 99 | | | | | 106 37 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 70 87 | 1,300 01 | 1,328 88 | 1,330 21 | 1,317 00 | 1,330 01 | 925 92 | | | | | 7,602 90 |
| Fuel, Coal and Oil | | 642 45 | | | 1,228 30 | 1,154 18 | 625 63 | 963 61 | | | | | 4,614 17 |
| Water | | | | | | | | 121 00 | | 12 00 | | | 133 00 |
| Subsistence | 18 82 | 30 00 | 372 00 | 418 00 | 425 40 | 449 58 | 475 70 | 276 58 | 54 50 | | | | 2,520 58 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 380 47 | 309 30 | 34 48 | 8 74 | 247 50 | 27 90 | 129 45 | 8 44 | | | | | 1,146 28 |
| Stores (General | 138 39 | 13 13 | | | 105 96 | 15 50 | 2 10 | 2 60 | | | | | 277 68 |
| Repairs (Material | 2,557 00 | 602 88 | 246 93 | 10 59 | 5 37 | 632 37 | 1,132 87 | 1,112 23 | 128 35 | 26 69 | 81 77 | 1,602 00 | 8,139 05 |
| Repairs (Wages | 1,205 76 | 883 13 | | | | | | 449 98 | 483 76 | 201 59 | 200 00 | 252 42 | 3,676 64 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | | | | 11 97 | | 6 05 | 67 55 | 76 54 | | | 27 40 | 189 51 |
| Total Expenses | 4,300 44 | 2,551 76 | 1,953 42 | 1,766 21 | 3,354 71 | 3,596 53 | 3,701 81 | 3,927 91 | 743 15 | 240 28 | 281 77 | 1,881 82 | 28,299 81 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | | | From | To | | |
| Tug *Canso* | June 25 | July 25 | Campbellton, N.B | 6,824 60 | | | | | |
| " | Aug. 31 | Nov. 12 | " | | | | | | |
| " | July 27 | Aug. 29 | Mission Pt., P.Q | 2,353 29 | | | | | |
| | | | | 9,177 89 | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
| Campbellton, N.B | 5,304 36 | 3,219 17 | 92 81 | 1,758 15 | | | 799 76 | 193 92 | 5,678 53 | 2,565 15 | | 132 24 | 19,744 09 |
| Mission Pt., P.Q | 2,298 54 | 1,395 00 | 40 19 | 762 43 | | | 346 52 | 83 76 | 2,460 52 | 1,111 49 | | 57 27 | 8,555 72 |
| Totals | 7,602 90 | 4,614 17 | 133 00 | 2,520 58 | | | 1,146 28 | 277 68 | 8,139 05 | 3,676 64 | | 189 51 | 28,299 81 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Campbellton, N.B | June 26 | July 25 | Sand, stone, logs, gravel, sticks. | 58,800 | 840-00 | 498-30 | 39·607 | ·335 |
| Mission Pt., P.Q | Sept. 2 | Nov. 12 | | | | | | |
| | July 28 | Aug. 29 | Sand, stone, mud, gravel | 17,200 | 360-00 | 216-00 | 39·609 | ·497 |
| Totals | | | | 76,000 | 1,200-00 | 714-30 | 39·607 | ·372 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Campbellton, N.B | 45 00 | 36 00 | 27 30 | | 110 00 | 30 00 | 5 00 | | 4 00 | 40 00 | |
| Mission Pt., P.Q | 27 00 | 6 00 | | | 52 00 | | 14 00 | | 6 00 | 27 00 | |
| Totals, hours | 72 00 | 42 00 | 27 30 | | 162 00 | 30 00 | 19 00 | | 10 00 | 67 00 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Campbellton, N.B | | | 10 00 | | 34 00 | 341 30 | |
| Mission Pt., P.Q | | | 10 00 | | 2 00 | 144 00 | |
| Totals, hours | | | 20 00 | | 36 00 | 485 30 | |

General Remarks: Dredge put into commission at Campbelllton, N.B., on June 26· laid up for season at Dalhousie, N.B., on Nov. 14.

## DREDGE, P.W.D. No. 3 ("RESTIGOUCHE") PROVINCE OF NEW BRUNSWICK

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 6,488 | 19,441 | 31,776 | 26,414 | 17,306 | 15,241 | 5,337 | | | | | 122,003 |
| Class of material | | Sand | Clay & gravel. | Gravel & sand. | Sand, clay & gravel. | Sand & clay clay. | Sand, clay & gravel. | Mud, clay & sand. | | | | | |
| Total possible dredging time hrs | | 120 00 | 260 00 | 270 00 | 260 00 | 260 00 | 270 00 | 140 00 | | | | | 1,580 |
| Total time lost hrs | | 91 00 | 187 00 | 186 00 | 192 00 | 157 00 | 176 30 | 99 30 | | | | | 1,089 |
| Hours actually dredging | | 29 00 | 73 00 | 84 00 | 68 00 | 103 00 | 93 30 | 40 30 | | | | | 491 |
| C.yds. handled per hour | | 223·73 | 266·31 | 378·29 | 388·44 | 168·02 | 163·01 | 131·78 | | | | | 248·49 |

### Details of Expenditure by Months.

| Items of Expense. | April. $ cts. | May. $ cts. | June. $ cts. | July. $ cts. | August. $ cts. | September. $ cts. | October. $ cts. | November. $ cts. | December. $ cts. | January. $ cts. | February. $ cts. | March. $ cts. | Totals. $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 664 09 | 1,522 28 | 1,181 48 | 1,195 00 | 1,194 50 | 1,195 00 | 880 94 | 76 53 | | | | 7,909 82 |
| Fuel, Coal and Oil | | | 695 41 | 889 27 | 822 30 | 790 10 | 627 83 | 1,048 36 | | | | | 4,873 30 |
| Water | | | 16 69 | 37 50 | 25 00 | 49 25 | 35 50 | 56 25 | | | | | 220 19 |
| Subsistence | | 257 81 | 485 90 | 394 56 | 401 06 | 398 84 | 389 54 | 282 49 | 71 30 | 6 75 | | | 2,688 25 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores {Machinery | 519 61 | 71 36 | 132 91 | 47 72 | 332 87 | 76 08 | 65 18 | 237 99 | 6 30 | 6 95 | | 166 90 | 1,663 87 |
| Stores {General | 7 30 | 4 50 | 1 00 | | 6 65 | 79 81 | | 37 29 | | 1 93 | | | 138 48 |
| Repairs {Material | 821 68 | 422 21 | 265 97 | 215 71 | 22 09 | 680 69 | 46 90 | 233 51 | 162 50 | 505 94 | 38 75 | 3,966 29 | 7,382 24 |
| Repairs {Wages | 1,043 71 | 499 62 | 102 88 | | | | | 322 06 | 635 47 | 195 00 | 520 00 | 527 75 | 3,846 49 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 2 58 | 21 55 | 41 99 | 3 74 | 8 60 | | 223 48 | 53 70 | | | | 355 64 |
| Total Expenses | 2,392 30 | 1,922 17 | 3,244 62 | 2,808 23 | 2,808 71 | 3,277 87 | 2,359 95 | 3,322 37 | 1,005 80 | 716 57 | 558 75 | 4,660 94 | 29,078 28 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | To | Locality. | Expenses $ cts. | Name of Tug. | Employed. From | To | Locality. | Expenses. $ cts. |
| Tug *Fredericton* | May 18. | June 15. | Bathurst, N.B. | 1,213 75 | Steamer *Hiawatha* | Dec. 18. | | Halifax, N.S. | 15 00 |
| " | Nov. 14. | Nov. 17. | " | | | | | | |
| " | June 16. | July 15. | Bathurst, Outer Bar | 4,201 38 | | | | | |
| " | Aug. 19. | Oct. 31. | " | | | | | | |
| " | Nov. 9. | Nov. 12. | " | | | | | | |
| " | July 16. | Aug. 18. | Chatham, N.B. | 1,400 46 | | | | | |
| " | Nov. 2. | Nov. 7. | Bathurst Village | 280 19 | | | | | |
| Tug *Sogenada* | June 1. | June 24. | Bathurst, N.B. | 987 52 | | | | | |
| | | | | 8,083 30 | | | | | |

DETAILS OF EXPENS AND RESESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Bathurst, Tete-a-Gouche Bar | 1,337 14 | 823 87 | 37 11 | 454 42 | | | 281 30 | 23 44 | 1,247 60 | 650 22 | | 60 15 | 4,915 25 |
| " " | | | | | | | | | | | | | |
| Bathurst, Outer Bar | 4,792 52 | 2,952 68 | 133 54 | 1,628 81 | | | 1,008 00 | 83 89 | 4,474 02 | 2,330 61 | | 215 45 | 17,619 52 |
| " | | | | | | | | | | | | | |
| " | | | | | | | | | | | | | |
| Chatham, N.B | 1,490 18 | 918 07 | 41 47 | 506 43 | | | 313 49 | 26 18 | 1,390 44 | 724 64 | | 67 03 | 5,477 93 |
| Bathurst Village | 289 98 | 178 68 | 8 07 | 98 59 | | | 61 08 | 4 97 | 270 18 | 141 02 | | 13 01 | 1,065 58 |
| Totals | 7,909 82 | 4,873 30 | 220 19 | 2,688 25 | | | 1,663 87 | 138 48 | 7,382 24 | 3,846 49 | | 355 64 | 29,078 28 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Bathurst, Tete-a-Gouche Bar | May 19 | June 15 | Sand and clay | 13,653 | 320 | 83-00 | 59·22 | ·360 |
| " | Nov 16 | Nov. 17 | Mud and clay | | | | | |
| Bathurst, Outer Bar | June 18 | July 13 | Clay, gravel, sand | 72,068 | 900 | 267-30 | 59·22 | ·244 |
| " | Aug. 20 | Oct. 31 | Sand, clay, gravel | | | | | |
| " | Nov. 9 | Nov. 12 | Mud, clay, sand | | | | | |
| Chatham, N.B | July 20 | Aug. 14 | Sand, clay, gravel | 34,596 | 300 | 92-30 | 59·22 | ·158 |
| Bathurst Village | Nov. 2 | Nov. 7 | Mud, clay, sand | 1,686 | 60 | 18-00 | 59·20 | ·632 |
| Totals | | | | 122,003 | 1,580 | 491-00 | 59·22 | ·238 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Bathurst, Tete-a-Gouche Bar | 11 00 | 4 30 | 52 00 | 1 00 | 14 00 | 20 00 | 82 00 | | 19 00 | 8 30 | |
| Bathurst, Outer Bar | 53 30 | 11 00 | 210 30 | 2 30 | 37 30 | 30 00 | 86 00 | | 42 00 | 18 30 | 2 00 |
| Chatham, N.B | 10 00 | 27 00 | 51 00 | | | | 5 30 | 2 30 | 24 00 | 15 00 | |
| Bathurst Village | | | 20 00 | | 8 30 | | 1 00 | | 1 30 | | |
| Totals, hours | 74 30 | 42 30 | 333 30 | 3 30 | 60 00 | 50 00 | 174 30 | 2 30 | 86 30 | 42 00 | 2 00 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Bathurst, Tete-a-Gouche Bar | 2 00 | 1 30 | | | 21 30 | 237 00 | |
| Bathurst, Outer Bar | 1 00 | | | | 108 00 | 602 30 | |
| Chatham, N.B | 1 00 | | | | 71 30 | 207 30 | |
| Bathurst Village | | | | | 11 00 | 42 00 | |
| Totals, hours | 4 00 | 1 30 | | | 212 00 | 1,089 00 | |

General Remarks: Dredge put into commission at Bathurst, N.B., on May 18; laid up for season at Halifax, N.S., on December 5, 1914.

# NOVA SCOTIA.

## DREDGE, P.W.D. No. 5 ("NORTHUMBERLAND"), PROVINCE OF NOVA SCOTIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 18,325 | 143,396 | 88,591 | 73,908 | 80,045 | 38,571 | | | | | 442,836 |
| Class of material | | | Mud, clay & sand. | Mud & clay. | Mud, clay, sand, stones | Gravel, mud sand, stones | Mud, sand, clay. | Oystershells mud. | | | | | |
| Total possible dredging time...hrs | | | 130 00 | 490 00 | 480 00 | 480 00 | 490 00 | 240 00 | | | | | 2,310 00 |
| Total time lost.....hrs | | | 76 00 | 169 30 | 175 00 | 238 00 | 242 00 | 130 00 | | | | | 1,030 30 |
| Hours actually dredging | | | 54 00 | 320 30 | 305 00 | 242 00 | 248 00 | 110 00 | | | | | 1,279 30 |
| C.yds. handled per hour | | | 339·35 | 448·11 | 290·46 | 305·41 | 322·76 | 350·70 | | | | | 346·23 |

### Details of Expenditure by Months.

| Items of Expense. | April. $ cts | May. $ cts | June. $ cts | July. $ cts | August. $ cts. | September. $ cts. | October. $ cts. | November. $ cts. | December. $ cts | January. $ cts. | February. $ cts. | March. $ cts | Totals. $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 1,346 33 | 1,454 08 | 1,470 02 | 1,447 51 | 1,463 24 | 629 38 | | | | | 7,810 56 |
| Fuel, Coal and Oil | | 190 56 | | 246 23 | 1,965 53 | 1,509 05 | 22 00 | 3,036 30 | | | | | 6,969 67 |
| Water | | | | 61 60 | 274 40 | 117 60 | 145 60 | 78 40 | | | | | 677 60 |
| Subsistence | | 105 55 | 419 60 | 535 27 | 535 02 | 479 05 | 510 00 | 241 44 | 2 35 | | | | 2,828 28 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 163 45 | 146 03 | 94 10 | 16 25 | 182 74 | 485 78 | 10 00 | 174 23 | | | | | 1,272 58 |
| Stores (General | | 60 44 | 1 50 | | | 3 70 | | 21 13 | | | | | 86 77 |
| Repairs (Material | 4,122 50 | 6,200 85 | 2,258 60 | 2,453 36 | 651 40 | 1,490 79 | 306 04 | 311 03 | 594 88 | 132 40 | 105 00 | 8 20 | 18,635 05 |
| Repairs (Wages | 992 00 | 1,253 35 | | | | | | 740 62 | 229 64 | 107 50 | 107 50 | 121 70 | 3,552 31 |
| Rental of tugs | | | | 25 00 | 80 00 | 178 00 | 25 00 | 155 00 | | | | | 463 00 |
| Contingencies | | | | 2,114 32 | 442 61 | 39 35 | | 131 77 | 6 25 | | | 6 00 | 2,740 30 |
| Total Expenses | 5,277 95 | 7,956 78 | 4,120 13 | 6,906 11 | 5,601 72 | 5,750 83 | 2,481 88 | 5,519 30 | 833 12 | 239 90 | 212 50 | 135 90 | 45,036 12 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts |
|---|---|---|---|---|

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| S.S. *Robie M* | April 29 | | Pictou, N.S | 12 50 |
| S.S. *Hiawatha* | Apr. 29 & 30 | | " | 32 00 |
| " | May 6 & 20 | | " | |
| " | June 19 | | Market Whf. to Stone House Point. | 25 00 |
| Pictou Co. Contractors | June 19 | June 20 | Towing pontoons to locks | 55 00 |
| Supply Co. Contractors | Aug. 3 & 10 | | Trenton, N.S | 50 00 |
| S.S. *Hiawatha* | Aug. 10 & Sept. 24 | | Stone House Pt. and Trenton. | 65 00 |
| Pictou Co. Contr. Supply Co | Sept. 24 | | " | 40 00 |
| W. H. Wooley (motor boat) | Sept. 12 | Sept. 26 | Stone House Pt | 48 00 |
| S.S. *Hiawatha* | Oct. 26 | | East River | 25 00 |
| " | Nov. 2 | Nov. 23 | Stone House Pt. to Pictou | 80 00 |
| Pictou Co. Contr. Supply Co. | Nov. 4 | Nov. 17 | I.d. Ground to Pictou | 75 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. |
| East River Locks, Trenton, N.S | 2,701 21 | 2,410 34 | 234 23 | 978 04 | ..... | ..... | 440 00 | 30 05 | 6,444·65 | 1,228 20 | 160 20 | 947 59 | 15,574 51 |
| Trenton Basin, N.S | 2,527 03 | 2,255 11 | 219 15 | 915 05 | ..... | ..... | 411 66 | 28 06 | 6,029 60 | 1,150 16 | 149 80 | 886 57 | 14,572 19 |
| Stone House Point, N.S | 1,558 38 | 1,372 69 | 133 45 | 557 04 | ..... | ..... | 250 64 | 17 08 | 3,670 20 | 699 45 | 91 20 | 539 73 | 8,869 86 |
| Channel to Receiving Locks | 372 42 | 332 31 | 32 41 | 134 93 | ..... | ..... | 60 78 | 4 13 | 888 48 | 169 24 | 22 00 | 130 80 | 2,147 50 |
| Old Loading Ground, East River, N.S | 671 52 | 599 22 | 58 36 | 243 22 | ..... | ..... | 109 50 | 7 45 | 1,602 12 | 305 26 | 39 80 | 235 61 | 3,872 06 |
| Totals | 7,810 56 | 6,969 67 | 677 60 | 2,828 28 | ..... | ..... | 1,272 58 | 86 77 | 18,635 05 | 3,552 31 | 463 00 | 2,740 30 | 45,036 12 |

| Expenses Working at | Time Working. | | Kind of Material. Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| East River Locks, Trenton, N.S | June 23 | Aug. 8 | Mud, clay, sand | 186,318 | 770 | 442 30 | 35·196 | ·083 |
| Trenton Basin, N.S | Aug. 10 | Sept. 23 | Gravel, mud, sand | 116,610 | 720 | 414 00 | 35·198 | ·125 |
| Stone House Point, N.S | Sept. 24 | Oct. 24 | Mud, sand, clay | 84,957 | 490 | 252 00 | 35·198 | ·104 |
| Channel to Receiving Locks | Oct. 26 | Oct. 31 | Mud, sand, clay | 16,380 | 110 | 61 00 | 35·204 | ·131 |
| Old Loading Ground, East River, N.S | Nov. 2 | Nov. 14 | Oyster shells, mud | 38,571 | 220 | 110 60 | 35·200 | ·100 |
| Totals | | | | 442,836 | 2,310 | 1,279 30 | 35·198 | ·101 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Connecting and Disconnecting Pontoons | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Pontoons aground. | | Fuel. | Moving land pipes and pontoons. |
| East River Locks, Trenton, N.S | 19 | 24 | 33 | 24 | 13 | 20 | 9 | 42 | ..... | ..... | 78 |
| Trenton Basin, N.S | 8 | 6 | 4 | 17 | 28 | 20 | 10 | 10 | 14 | ..... | 28 |
| Stone House Pt., N.S | 52 | 10 | 10 | 28 | 55 | 20 | 19 | ..... | 10 | ..... | 10 |
| Channel to Receiving Locks | 17 | 8 | 11 | 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Old Loading Ground, East River, N.S | ..... | 10 | 40 | 11 | ..... | ..... | 10 | 7 | 10 | 3 | 2 |
| | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, hours | 96 | 58 | 98 | 89 | 96 | 60 | 48 | 59 | 34 | 3 | 118 |

| Time Lost at | Cleaning. | | Putting on land pipes. | Swinging chain broke. | Repairs crib work. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| | Plant. | Repairs Pontoons. | | | | | | |
| East River Locks, Trenton, N.S | 6 | 11 | 22 | 7 | 13 30 | 6 | 327 30 | |
| Trenton Basin, N.S | 6 | 19 | 2 | 28 | 97 | 9 | 306 00 | |
| Stone House Pt., N.S | 3 | 4 | ..... | 9 | ..... | 8 | 238 00 | |
| Channel to Receiving Locks | 1 | ..... | ..... | 3 | ..... | ..... | 49 00 | |
| Old Loading Ground, East River, N.S | 2 | 6 | ..... | 9 | ..... | ..... | 110 00 | |
| Totals, hours | 18 | 40 | 24 | 56 | 110 30 | 23 | 1,030 30 | |

General Remarks: Dredge put into commission at East River Locks, N.S., on June 23; laid up for season at Pictou, N.S., on Nov. 14, 1914.

## DREDGE, P.W.D. No. 6 ("CAPE BRETON") PROVINCE OF NOVA SCOTIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 3,085 | 3,785 | 8,315 | 1,700 | | | | | | 16,885 |
| Class of material | | | | Ledge and rock. | Clay, rock and stone. | Sand and ballast. | Gravel, sand stone. | | | | | | |
| Total possible dredging time | | | | 80 00 | 260 00 | 261 00 | 90 00 | | | | | | 691 00 |
| Total time lost | | | | 21 55 | 145 25 | 158 40 | 70 30 | | | | | | 396 30 |
| Hours actually dredging | | | | 58 05 | 114 35 | 102 20 | 19 30 | | | | | | 294 30 |
| C.yds. handled per hour | | | | 53 12 | 33 03 | 81 26 | 87 18 | | | | | | 57 30 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 27 43 | 960 82 | 1,126 50 | 1,140 10 | 1,155 05 | 834 55 | | | | | | 5,244 45 |
| Fuel, Coal and Oil | | 282 76 | 250 80 | 241 33 | 500 55 | 392 78 | 606 19 | | | | | | 2,274 41 |
| Water | | 1 66 | 6 33 | 20 74 | 13 52 | 1 66 | 3 16 | | | | | | 47 07 |
| Subsistence | | | 354 04 | 349 03 | 454 15 | 402 00 | 297 65 | | | | | | 1,856 87 |
| Wharfage | | | | | | | 54 00 | | | | | | 54 00 |
| Pilotage | | | 14 20 | | 7 10 | 7 10 | 7 10 | | | | | | 35 50 |
| Stores / Machinery | | 169 55 | 212 98 | 558 96 | 522 67 | 384 45 | 75 20 | | | | | 103 45 | 2,027 26 |
| Stores \ General | 28 68 | 9 00 | 9 35 | 1 30 | 25 74 | 12 00 | 10 12 | | 3 00 | 3 20 | | 8 05 | 110 44 |
| Repairs / Material | 4,433 00 | 621 48 | 516 59 | 196 44 | 632 42 | 77 56 | 1,294 63 | 336 78 | 234 80 | 123 83 | 224 84 | 748 28 | 9,440 65 |
| Repairs \ Wages | 614 33 | 1,037 72 | | 44 52 | | | 265 08 | 369 92 | 321 44 | 215 02 | 306 75 | 275 27 | 3,450 05 |
| Rental of tugs | | | | | | 10 00 | 240 00 | 540 00 | | | | | 790 00 |
| Contingencies | | 13 60 | 16 40 | 14 82 | 30 90 | 83 37 | 40 56 | | 7 29 | | | 1 66 | 208 60 |
| Total Expenses | 5,076 01 | 2,163 20 | 2,341 51 | 2,553 64 | 3,327 15 | 2,525 97 | 3,728 24 | 1,246 70 | 566 53 | 342 05 | 531 59 | 1,136 71 | 25,539 30 |

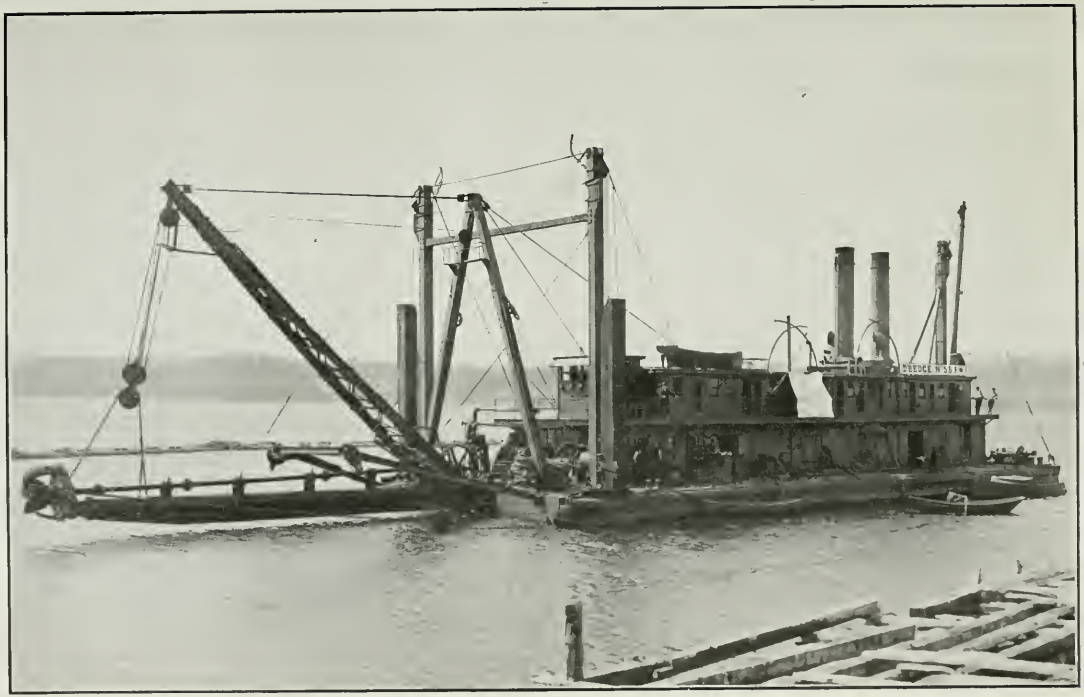
### Details of Tug service—Tugs in attendance, and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| Tug *Lisgar* | May 9.. | June 22.. | Port Hawkesbury | 2,583 11 |
| " | Aug. 20.. | Aug. 26.. | " | |
| " | " 16.. | " 19.. | Mulgrave, N.S. | 184 50 |
| " | " 27.. | Oct. 20.. | Port Hood, N.S. | 2,767 50 |
| " | Oct. 21.. | " 26.. | Port Hawkesbury | 307 50 |
| Tug *Sogenada* | June 25.. | Aug. 5.. | " | 1,687 98 |
| " | Aug. 6.. | " 17.. | Mulgrave, N.S. | 468 93 |
| | | | | 7,999 52 |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| Tug *Nelson* | Sept. 30.. | | Pt. Tupper, N.S. | 10 00 |
| | " 22.. | Sept. 30.. | Pt. Hood, N.S. | |
| | Oct. 1.. | Oct. 21.. | & Smith's Cove | 780 00 |
| | | | | 790 00 |



Dredge "Northumberland" No. 5. Nova Scotia.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | 1 cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Port Hawkesbury, N.S. | 1,397 34 | 607 20 | 12 54 | 495 04 | ..... | 14 20 | 537 02 | 29 62 | 2,533 20 | 913 60 | ..... | 55 60 | 6,595 36 |
| Mulgrave, N.S. | 1,563 20 | 682 00 | 14 03 | 553 33 | ..... | 7 10 | 602 00 | 33 46 | 2,812 00 | 1,028 90 | ..... | 61 00 | 7,357 92 |
| Port Hood, N.S. | 1,289 57 | 558 60 | 11 57 | 456 57 | 30 00 | 7 10 | 496 00 | 27 36 | 2,320 35 | 853 00 | 437 00 | 51 60 | 6,538 72 |
| Smith's Cove, N.S. | 994 34 | 426 61 | 8 93 | 351 93 | 24 00 | 7 10 | 392 24 | 20 00 | 1,775 10 | 654 55 | 353 00 | 39 50 | 5,047 30 |
| Totals | 5,244 45 | 2,274 41 | 47 07 | 1,856 87 | 54 00 | 35 50 | 2,027 26 | 110 44 | 9,440 65 | 3,450 05 | 790 00 | 208 60 | 25,539 30 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Port Hawkesbury, N.S | July 23 | Aug. 5 | Ledge rock | 3,675 | 180 00 | 78 35 | 83·92 | 1·705 |
| " | Aug. 20 | " 26 | Clay and stone | ..... | ..... | ..... | ..... | ..... |
| Mulgrave, N.S. | " 6 | " 19 | Clay, rock, stone | 2,695 | 120 00 | 87 45 | 83·85 | 2·730 |
| Port Hood, N.S. | " 27 | Oct. 10 | Gravel, sand, stone | 5,465 | 211 00 | 72 20 | 90·40 | 1·196 |
| Smith's Cove, N.S. | Sept. 4–5, 9–10, Oct. 6–8 | 12–19, 24–26 & | Gravel, sand, rock | 5,050 | 180 00 | 55 50 | 90·40 | ·999 |
| Totals | ..... | ..... | ..... | 16,885 | 691 00 | 294 30 | 86·73 | 1·512 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Port Hawkesbury, N.S. | 22 00 | 1 00 | 40 00 | ..... | 18 55 | ..... | ..... | 5 00 | 8 30 | ..... | ..... |
| Mulgrave, N.S. | 13 30 | 4 00 | ..... | ..... | ..... | ..... | ..... | ..... | 8 45 | ..... | ..... |
| Port Hood, N.S. | 3 30 | 11 00 | 90 30 | ..... | ..... | ..... | ..... | ..... | 26 40 | 4 30 | ..... |
| Smiths' Cove, N.S. | 6 15 | ..... | 61 25 | ..... | 16 00 | 10 00 | 10 00 | ..... | 2 00 | 5 00 | ..... |
| Totals, hours | 45 15 | 16 00 | 191 55 | ..... | 34 55 | 10 00 | 10 00 | 5 00 | 45 55 | 9 30 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Port Hawkesbury, N.S. | ..... | ..... | ..... | ..... | 6 00 | 101 25 | |
| Mulgrave, N.S. | ..... | ..... | ..... | ..... | 6 00 | 32 15 | |
| Port Hood, N.S. | ..... | ..... | ..... | ..... | 2 30 | 138 40 | |
| Smith's Cove, N.S. | ..... | ..... | ..... | ..... | 13 30 | 124 10 | |
| Totals, hours | ..... | ..... | ..... | ..... | 28 00 | 396 30 | |

General Remarks: Dredge put into commission at Port Hawkesbury, N.S., on July 23; laid up for season at Port Hawkesbury, N.S., on Oct. 23, 1914.

DREDGE, P.W D. No. 7 ("CANADA") PROVINCE OF NOVA SCOTIA.

Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | Marcb. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 7,325 | 12,060 | 14,030 | 14,500 | 18,600 | 11,900 | 12,800 | | | | 92,115 |
| Class of material | | | Mud & sand | Sawdust, mud & sand | Sawdust & mud. | Mud & sand | Mud & sand | Mud & sand | Mud & sand | | | | |
| Total possible dredging time...hrs | | | 210.00 | 270.00 | 260.00 | 260.00 | 270.00 | 250.00 | 200.00 | | | | 1,720.00 |
| Total time lost...hrs | | | 72.00 | 88.00 | 118.00 | 119.00 | 101.00 | 148.00 | 93.00 | | | | 739.00 |
| Hours actually dredging | | | 138.00 | 182.00 | 142.00 | 141.00 | 169.00 | 102.00 | 107.00 | | | | 981.00 |
| C. yds. handled per hour | | | 53·08 | 71·21 | 98·66 | 102·84 | 110·06 | 116·67 | 119·62 | | | | 93·88 |

Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 737 00 | 737 00 | 737 00 | 819 14 | 756 56 | 758 34 | 651 52 | | | | 5,196 56 |
| Fuel, Coal and Oil | | | 170 50 | 335 50 | 858 00 | 423 50 | 493 05 | 440 00 | 429 00 | | | | 3,149 55 |
| Water | | | 7 50 | 20 00 | 48 75 | 10 00 | 24 50 | 20 00 | 26 00 | | | | 156 75 |
| Subsistence | 24 88 | 10 91 | 248 00 | 248 10 | 267 70 | 198 75 | 238 82 | 188 42 | 252 90 | | | | 1,678 48 |
| Wharfage | | | | | 45 00 | 13 34 | 20 00 | 20 00 | 20 00 | | | | 118 34 |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 470 35 | | 36 23 | 6 02 | 244 71 | 120 48 | 4 15 | 10 87 | 56 29 | 350 92 | | | 1,300 02 |
| Stores (General | 50 99 | | | | 7 31 | 15 13 | | | | | | | 73 43 |
| Repairs (Material | 5,169 84 | 516 27 | 2,074 54 | 66 18 | 69 31 | 52 75 | 2,075 02 | 509 01 | 44 04 | 946 40 | 57 27 | 615 03 | 12,195 66 |
| Repairs (Wages | 702 52 | 794 51 | | | | | 28 72 | 119 39 | 70 53 | 490 01 | 110 05 | 117 95 | 2,433 68 |
| Rental of tugs | | | | 936 00 | 2,220 00 | 1,088 00 | 1,088 00 | 1,000 00 | 1,040 00 | | | | 7,352 00 |
| Contingencies | | | 2 25 | 3 40 | 2 74 | 7 25 | | 9 75 | | 4 25 | | | 29 64 |
| Total Expenses | 6,418 58 | 1,321 69 | 3,276 02 | 2,352 20 | 4,500 52 | 2,728 34 | 4,728 82 | 3,075 78 | 2,590 28 | 1,791 58 | 167 32 | 732 98 | 33,684 11 |

Details of Tug Service—Tugs in attendance, and included in these operations.

Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| | | | | |

Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| S.S. *Delbert D* | June 5. | Sept. 2. | Liverpool, N.S | 3,574 00 |
| | Sept. 3. | Dec. 31. | Lockport, N.S | 3,778 00 |
| | Jan. 1. | Jan. 19. | Liverpool, N.S | 540 00 |
| | | | | 7,892 00 |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| Liverpool, N.S. | 2,527 30 | 1,531 67 | 76 32 | 817 67 | 57 66 | ..... | 630 00 | 35 22 | 5,930 64 | 1,153 34 | 3,574 00 | 14 40 | 16,377 62 |
| Lockport, N.S. | 2,669 26 | 1,617 88 | 80 43 | 860 81 | 60 68 | ..... | 670 02 | 38 21 | 6,265 62 | 1,250 34 | 3,778 00 | 15 24 | 17,306 49 |
| Totals | 5,196 56 | 3,149 55 | 156 75 | 1,678 48 | 118 34 | ..... | 1,300 02 | 73 43 | 12,195 66 | 2,433 68 | 7,352 00 | 29 64 | 33,684 11 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Liverpool, N.S. | June 6 | Sept. 2 | Sawdust, mud, sand | 35,715 | 760 00 | 477 00 | 34·334 | ·458 |
| Lockport, N.S. | Sept. 10 | Dec. 23 | Mud and sand | 56,400 | 960 00 | 504 00 | 34·338 | ·306 |
| Totals | | | | 92,115 | 1,720 00 | 981 00 | 34·336 | ·365 |

## Explanation of Unavoidable Loss of Time.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Liverpool, N.S. | 22.00 | 13.00 | 86.00 | ..... | ..... | 10.00 | 12.00 | ..... | 86.00 | ..... | ..... |
| Lockport, N.S. | 57.00 | 24.00 | 109.00 | ..... | ..... | 20.00 | 10.00 | ..... | 80.00 | 44.00 | ..... |
| Totals, hours | 79.00 | 37.00 | 195.00 | ..... | ..... | 30.00 | 22.00 | ..... | 166.00 | 44.00 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Liverpool, N.S. | ..... | 10.00 | ..... | ..... | 44.00 | 283.00 | |
| Lockport, N.S. | ..... | 10.00 | ..... | ..... | 102.00 | 456.00 | |
| Totals, hours | ..... | 20.00 | ..... | ..... | 146.00 | 739.00 | |

General Remarks; Dredge put into commission at Liverpool, N.S., on June 6; laid up for season at Liverpool, N.S., on Jan. 4, 1915.

# PRINCE EDWARD ISLAND.

## DREDGE, P.W.D. No. 9 ("MONTAGUE") PROVINCE OF PRINCE EDWARD ISLAND.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 7,200 | 8,200 | 16,200 | 11,000 | 5,600 | 9,800 | 5,600 | | | | 63,600 |
| Class of material | | | Mud, sand, rock. | Rock, clay | Mud, clay, sand. | Mud & sand | Sand | Mud | Mud | | | | |
| Total possible dredging time | | | 160 00 | 270 00 | 260 00 | 260 00 | 270 00 | 250 00 | 80 00 | | | | 1,550 00 |
| Total time lost hrs | | | 65 30 | 138 30 | 79 00 | 154 00 | 211 00 | 142 00 | 23 00 | | | | 813 00 |
| Hours actually dredging | | | 94 30 | 131 30 | 181 00 | 106 00 | 59 00 | 108 00 | 57 00 | | | | 737 00 |
| C.yds. handled per hour | | | 76·19 | 62·35 | 89·50 | 103·77 | 94·91 | 90·74 | 98·24 | | | | 86·29 |

### Details of Expenditures by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Wages | | | 545 00 | 545 00 | 550 00 | 557 36 | 545 00 | 622 33 | 167 84 | | | | 3,532 53 |
| Fuel, Coal and Oil | | 98 56 | | 511 62 | | 396 64 | | 174 02 | | | | | 1,180 84 |
| Water | | | | 10 50 | 35 00 | 36 25 | 14 00 | 13 50 | 4 00 | | | | 113 25 |
| Subsistence | 36 23 | 13 91 | 186 64 | 194 85 | 194 45 | 180 00 | 210 06 | 205 21 | 165 00 | | | | 1,386 35 |
| Wharfage | | | | | | | | | | | | 12 00 | 12 00 |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | 53 60 | 135 42 | 43 75 | 6 12 | 46 84 | 99 65 | 75 26 | 195 76 | | 98 36 | | | 754 76 |
| Stores General | 0 40 | 4 24 | | | 23 50 | | 1 15 | 6 27 | | | | | 35 56 |
| Repairs Material | 1,235 67 | 323 14 | 37 50 | 124 13 | 568 87 | 205 81 | 188 50 | 2 40 | 408 46 | 56 24 | 26 37 | 8 10 | 3,155 19 |
| Repairs Wages | 558 38 | 554 75 | 11 30 | | | | | | 335 70 | 150 99 | 105 60 | 109 69 | 1,826 31 |
| Rental of tugs | | | | 425 00 | 1,565 00 | 1,090 00 | 612 50 | 675 00 | 225 00 | | | 200 00 | 4,792 50 |
| Contingencies | | | | 12 65 | 20 75 | 69 76 | 10 75 | 3 50 | 36 75 | | | 53 00 | 207 16 |
| Total Expenses | 1,884 28 | 1,130 02 | 824 19 | 1,829 87 | 3,004 41 | 2,635 47 | 1,657 22 | 1,897 99 | 1,342 75 | 305 59 | 131 87 | 382 79 | 17,026 45 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| Tug *F. C. Batt* | June 11 | June 13 | Georgetown, P.E.I. | 90 00 |
| " | " 15 | " 17 | Cardigan, P.E.I. | 60 00 |
| " | Sept. 21 | Sept. 23 | New London to Georgetown | 90 00 |
| Tug *Pekin* | June 18 | July 21 | Cardigan, P.E.I. | 1,650 00 |
| " | Nov. 10 | Dec. 9 | " | |
| " | Aug. 1 | Aug. 28 | French River, P.E.I. | 725 00 |
| " | " 29 | Sept. 11 | Stanley Bridge, P.E.I. | 400 00 |
| " | Sept. 12 | " 17 | Bay View, P.E.I. | 200 00 |
| " | Oct. 2 | Nov. 9 | Grand River, P.E.I. | 962 50 |
| Tug *Islander* | July 28 | Aug. 4 | Georgetown to French River | 240 00 |
| Tug *C. G. S. Brant* | " 29 | " 3 | Georgetown to New London | 225 00 |
| " | Sept. 20 | Sept. 23 | New London to Georgetown | 150 00 |
| SS. *Enterprise* | Nov. 18 | | Rescue dredge and scows at Boughton Islands | 50 00 |
| Tug *Amherst* | Dec. 11 | Dec. 12 | Georgetown to Charlottetown | 200 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Georgetown, P.E.I | 57 54 | 10 20 | 1 93 | 22 55 | | | 13 24 | 0 40 | 51 45 | 27 00 | 78 12 | 3 47 | 274 90 |
| Cardigan, P.E.I | 1,768 71 | 591 10 | 56 55 | 693 72 | | | 377 38 | 18 25 | 1,595 05 | 920 40 | 2,399 33 | 103 68 | 8,524 17 |
| French River, P.E.I | 843 56 | 282 23 | 27 02 | 331 88 | | | 180 52 | 8 60 | 761 02 | 437 00 | 1,144 45 | 49 45 | 4,065 73 |
| Stanley Bridge, P.E.I | 349 88 | 117 01 | 11 26 | 137 24 | 12 00 | | 74 46 | 3 45 | 315 65 | 180 50 | 474 74 | 20 51 | 1,696 79 |
| Bay View, P.E.I | 182 13 | 60 87 | 5 81 | 71 44 | | | 38 76 | 1 60 | 164 02 | 92 00 | 247 16 | 10 67 | 874 46 |
| Grand River, P.E.I | 330 71 | 110 43 | 10 68 | 129 52 | | | 70 40 | 3 26 | 298 00 | 169 41 | 448 70 | 19 38 | 1,590 49 |
| Totals | 3,532 53 | 1,180 84 | 113 25 | 1,386 35 | 12 00 | | 754 76 | 35 56 | 3,185 19 | 1,826 31 | 4,792 50 | 207 16 | 17,026 45 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Georgetown, P.E.I | June 12 | June 13 | Mud | 1,800 | 20 00 | 12 00 | 22·908 | ·1527 |
| Cardigan, P.E.I | June 16 & Nov. 16 | July 21, Dec. 9 | Sand, rock, clay | 28,200 | 600 00 | 369 00 | 23·101 | ·3022 |
| French River, P.E.I | Aug. 7 | Aug. 28 | Mud, clay, sand | 15,600 | 300 00 | 176 00 | 23·101 | ·2606 |
| Stanley Bridge, P.E.I | Aug. 31 | Sept. 11 | Mud, sand | 6,800 | 120 00 | 73 00 | 23·242 | ·2495 |
| Bay View, P.E.I | Sept. 12 | Sept. 17 | " | 4,800 | 60 00 | 38 00 | 23·012 | ·1822 |
| Grand River, P.E.I | Oct. 7 | Nov. 7 | Hard sand | 6,400 | 450 00 | 69 00 | 23·050 | ·2485 |
| Totals | | | | 63,600 | 1,550 00 | 737 00 | 23·102 | ·2677 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tids and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Georgetown, P.E.I | | | | | | | 3 00 | | 5 00 | | |
| Cardigan, P.E.I | 27 00 | 18 30 | 36 30 | | | 10 00 | 32 30 | 10 00 | 48 00 | 19 00 | |
| French River, P.E.I | 2 00 | 4 00 | 15 00 | | | | | 2 00 | 80 00 | 20 00 | |
| Stanley Bridge, P.E.I | 15 00 | 4 00 | | | | 10 00 | | | | 15 00 | |
| Bay View, P.E.I | | | | | | | | | 20 00 | | |
| Grand River, P.E.I | 16 00 | 46 00 | 151·30 | | | 10 00 | 10 00 | 10 00 | 135·30 | | |
| Totals, hours | 60 00 | 72 30 | 203 00 | | | 30 00 | 45 30 | 22 00 | 288 30 | 54 00 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Georgetown, P.E.I | | | | | | 8 00 | |
| Cardigan, P.E.I | 16 00 | | | | 13 30 | 231 00 | |
| French River, P.E.I | 1 00 | | | | | 124 00 | |
| Stanley Bridge, P.E.I | 1 00 | 2 00 | | | | 47 00 | |
| Bay View, P.E.I | | | | | 2 00 | 22 00 | |
| Grand River, P.E.I | | | | | 2 00 | 381 00 | |
| Totals, hours | 18 00 | 2 00 | | | 17 30 | 813 00 | |

General Remarks: Dredge put into commission at Georgetown, P.E.I., on June 12; laid up for season at Charlottetown, on Dec. 14, 1914.

## DREDGE, P.W.D. No. 10 ("PRINCE EDWARD") PROVINCE OF PRINCE EDWARD ISLAND.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 1,950 | 9,200 | 8,100 | 8,450 | 6,200 | 3,000 | 250 | | | | 37,150 |
| Class of material | | | Mud & clay. | Mud & clay. | Mud & sea-weed. | Mud, clay & saud. | Rock, clay & sand. | Mud & brick clay. | Clay | | | | |
| Total possible dredging time hrs | | | 90 00 | 270 00 | 260 00 | 260 00 | 270 00 | 250 00 | 10 00 | | | | 1,410 00 |
| Total time lost hrs | | | 45 00 | 77 00 | 87 00 | 98 00 | 89 00 | 154 00 | 5 00 | | | | 555 00 |
| Hours actually dredging | | | 45 00 | 193 00 | 173 00 | 162 00 | 181 00 | 96 00 | 5 00 | | | | 855 00 |
| C.yds. handled per hour | | | 43 33 | 47 67 | 46 82 | 52 15 | 34 25 | 32 81 | 30 00 | | | | 43 45 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 160 55 | 505 00 | 666 93 | 511 50 | 511 50 | 519 00 | 32 58 | | | | 2,907 06 |
| Fuel, Coal and Oil | | | | | | 181 98 | 94 12 | | 280 63 | | | | 556 73 |
| Water | | | | 0 90 | | 108 00 | | 140 40 | 49 45 | 3 00 | | | 301 75 |
| Subsistence | 3 92 | 5 80 | 65 58 | 185 81 | 173 50 | 175 07 | 180 60 | 182 51 | 11 40 | 0 40 | | | 984 59 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores { Machinery | 2 75 | 6 18 | | | 90 32 | 33 28 | 68 97 | 52 00 | 13 95 | | 3 24 | | 270 69 |
| Stores { General | | | | | | 9 70 | | 3 93 | | | | | 13 63 |
| Repairs { Material | 490 29 | 415 29 | 172 08 | 172 43 | 121 47 | 800 70 | | 589 13 | 97 41 | 9 74 | 356 51 | 171 83 | 3,396 97 |
| Repairs { Wages | 1,610 39 | 557 24 | 361 72 | 105 77 | | | 21 00 | 89 75 | 251 63 | 97 50 | 109 50 | 119 33 | 3,323 83 |
| Rental of tugs | | | | 275 00 | 1,340 00 | 700 00 | | 1,345 00 | | | | 300 00 | 3,960 00 |
| Contingencies | | | | | 236 80 | 9 01 | 3 75 | 5 60 | 7 80 | 28 88 | | | 291 84 |
| Total Expenses | 2,107 35 | 984 51 | 759 93 | 1,244 91 | 2,629 02 | 2,529 33 | 879 94 | 2,927 32 | 744 85 | 139 52 | 469 25 | 591 16 | 16,007 09 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

**Department Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|

**Rented Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *F. M. Batt* | June 18. | Aug. 5. | Charlottetown, P.E.I. | 1,075 00 |
| " | Aug. 7. | " 20. | Asylum Whf., P.E.I. | 350 00 |
| " | " 21. | Sept. 23. | Belfast, P.E.I. | 700 00 |
| " | Sept. 24. | Nov. 4. | Victoria, P.E.I. | 925 00 |
| " | Nov. 13. | Nov. 23 & Dec. 1. | Franklyn Pt., P.E.I. | 275 00 |
| " " | Nov. 24. | Nov. 30. | McConnell's Whf., P.E.I. | 175 00 |
| Tug *Islander* | Aug. 21. | | Asylum to Belfast, P.E.I. | 40 00 |
| " | Sept. 24. | | Belfast to Victoria, P.E.I. | 75 00 |
| " | Nov. 24 & 30. | | Franklyn Pt., P.E.I. | 45 00 |
| Tug *Amherst* | Dec. 14. | Dec. 16. | Craupaud to Charl'town, P.E.I | 300 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Charlottetown, Buntain and Bell Whf | 907 80 | 173 68 | 94 20 | 307 48 | ..... | ..... | 84 60 | 4 27 | 1,061 26 | 1,037 82 | 1,236 47 | 91 04 | 4,998 62 |
| Charlottetown, Asylum Whf | 306 00 | 59 34 | 31 77 | 103 58 | ..... | ..... | 28 45 | 1 44 | 357 30 | 349 83 | 416 79 | 30 69 | 1,685 19 |
| Belfast, P.E.I | 581 40 | 111 18 | 60 36 | 196 80 | ..... | ..... | 54 10 | 2 73 | 680 00 | 664 87 | 791 60 | 58 41 | 3,201 45 |
| Victoria, P.E.I | 853 40 | 163 23 | 88 60 | 289 30 | ..... | ..... | 79 54 | 4 01 | 997 18 | 974 63 | 1,163 23 | 85 69 | 4,698 81 |
| North R. Franklyn Pt | 136 06 | 26 30 | 14 12 | 46 10 | ..... | ..... | 12 60 | 0 64 | 158 20 | 155 65 | 185 20 | 13 64 | 748 51 |
| East R. McConnell's Whf | 122 40 | 23 00 | 12 70 | 41 33 | ..... | ..... | 11 40 | 0 54 | 143 03 | 141 03 | 166 71 | 12 37 | 674 51 |
| Totals | 2,907 06 | 556 73 | 301 75 | 984 59 | ..... | ..... | 270 69 | 13 63 | 3,396 97 | 3,323 83 | 3,960 00 | 291 84 | 16,007 09 |

| Expenses Working at | Time Working. | | Kind of material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Charlottetown, Buntain and Bell Whf | June 20 | Aug. 5 | Mud and clay | 12,300 | 400 | 267 | 18,721 | ·406 |
| Charlottetown, Asylum Whf | Aug. 7 | Aug. 20 | Mud, seaweed, clay | 4,150 | 130 | 90 | 18·724 | ·406 |
| Belfast, P.E.I | " 24 | Sept. 18 | Mud and clay | 10,000 | 290 | 171 | 18·721 | ·320 |
| Victoria, P.E.I | Sept. 25 | Nov. 4 | Sand, rock, clay | 8,150 | 390 | 251 | 18·720 | ·576 |
| North R. Franklyn Pt | Nov. 16 | Dec. 1 | Rock, clay | 1,450 | 140 | 40 | 18·713 | ·516 |
| East R. McConnell's Whf | " 25 | Nov. 30 | Mud, clay | 1,100 | 60 | 36 | 18·736 | ·613 |
| Totals | | | | 37,150 | 1,410 | 855 | 18·721 | ·430 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, Tugs, | Orders. | | Fuel. | Water. |
| Charlottetown, Buntain and Bell Whf | 25 00 | ..... | 5 00 | ..... | 54 00 | 10 00 | ..... | ..... | 4 00 | 11 00 | 2 00 |
| Charlottetown, Asylum Whf | 12 00 | ..... | ..... | ..... | 15 00 | ..... | ..... | ..... | 10 00 | 2 00 | ..... |
| Belfast, P.E.I | 11 00 | ..... | 51 00 | ..... | ..... | 10 00 | ..... | 10 00 | 10 00 | ..... | 1 00 |
| Victoria, P.E.I | 44 00 | ..... | 35 00 | ..... | ..... | ..... | 30 00 | 10 00 | 10 00 | 3 00 | ..... |
| North R., Franklyn Pt | 20 00 | ..... | 30 00 | ..... | 13 00 | ..... | ..... | ..... | 35 00 | ..... | ..... |
| East R., McConnell's Whf | ..... | ..... | 5 00 | ..... | 4 00 | ..... | ..... | ..... | 15 00 | ..... | ..... |
| Totals, hours | 112 00 | ..... | 126 00 | ..... | 86 00 | 20 00 | 30 00 | 20 00 | 84 00 | 16 00 | 3 00 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Charlottetown, Buntain and Bell Whf | 1 00 | 10 00 | ..... | ..... | 11 00 | 133 00 | |
| Charlottetown, Asylum Whf | ..... | ..... | ..... | ..... | 1 00 | 40 00 | |
| Belfast, P.E.I | ..... | 10 00 | 10 00 | ..... | 6 00 | 119 00 | |
| Victoria, P.E.I | ..... | ..... | ..... | ..... | 7 00 | 139 00 | |
| North R., Franklyn Pt | ..... | ..... | ..... | ..... | 2 00 | 100 00 | |
| East R., McConnell's whf | ..... | ..... | ..... | ..... | ..... | 24 00 | |
| Totals, hours | 1 00 | 20 00 | 10 00 | ..... | 27 00 | 555 00 | |

General Remarks: Dredge put into commission at Charlottetown, P.E.I., on June 20; laid up for season at Charlottetown, P.E.I., on Dec. 14, 1914.

## DREDGE, P.W.D. No. 11 ("POWNAL") PROVINCE OF PRINCE EDWARD ISLAND.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 1,450 | 5,632 | 4,050 | 4,675 | 1,195 | | | | | | 17,002 |
| Class of material | | | Mud | Sticks, mud, sand. | Rock, clay, mud. | Rock, clay, mud. | Rock, boulders. | | | | | | |
| Total possible dredging time hrs | | | 80 00 | 274 00 | 268 00 | 260 00 | 220 00 | | | | | | 1,102 00 |
| Total time lost hrs | | | 29 30 | 111 30 | 133 30 | 112 30 | 147 30 | | | | | | 534 30 |
| Hours actually dredging | | | 50 30 | 162 30 | 134 30 | 147 30 | 72 30 | | | | | | 567 30 |
| C.yds. handled per hour | | | 28 71 | 34 66 | 30 11 | 31 70 | 16 48 | | | | | | 29 96 |

### Details of Expenditure by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Wages | | | 362 00 | 390 64 | 462 15 | 425 42 | 400 00 | 99 34 | | | | | 2,139 55 |
| Fuel, Coal and Oil | | | | | 571 43 | 24 44 | 117 13 | 142 10 | | | | | 855 10 |
| Water | | | | 20 50 | 41 50 | 8 50 | 2 26 | | | | | | 72 76 |
| Subsistence | | 46 45 | 150 65 | 152 56 | 153 47 | 148 02 | 153 06 | 28 67 | | | | | 832 88 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | 5 00 | | | | | 5 00 |
| Stores (Machinery | 39 60 | 9 10 | | | 12 85 | 69 50 | | 4 40 | | | | | 135 45 |
| Stores (General | | | | | | 19 19 | 5 74 | | | | | | 24 93 |
| Repairs (Material | 317 58 | 154 57 | 306 08 | 48 04 | 837 81 | 449 78 | 9 62 | 227 69 | 94 00 | 43 70 | 110 20 | 30 20 | 2,629 27 |
| Repairs (Wages | 671 25 | 476 50 | | | | | | 190 42 | 134 66 | 99 35 | 95 00 | 95 00 | 2,062 18 |
| Rental of tugs | | | | 224 00 | 541 00 | 1,034 00 | 416 00 | 540 00 | | | | 600 00 | 3,355 00 |
| Contingencies | | | | 18 55 | 30 15 | 29 33 | 12 50 | 39 30 | 5 60 | 7 60 | | | 143 03 |
| Total Expenses | 1,328 43 | 686 62 | 818 73 | 833 79 | 2,629 36 | 2,241 18 | 1,122 55 | 1,279 18 | 234 26 | 150 65 | 205 20 | 725 20 | 12,255 15 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | $ cts. | | | | | $ cts. |
| | | | | | Tug *Victor* | June 15 | Nov. 5 | Belle river, P.E.I | 1,952 00 |
| | | | | | Tug *Wm. Aitken* | June 18 | | Charlottetown to Belle river | 125 00 |
| | | | | | Tug *Amherst* | July 18 | | Towing scows, Malpeque to Charlottetown. | 218 50 |
| | | | | | Tug *Islander* | Oct. 23 | Oct. 27 | Belle river to Charlottetown | 150 00 |
| | | | | | " | " 28 | Nov. 9 | Charlottetown to Malpeque | 390 00 |
| | | | | | Tug *Amherst* | " 28 | " 3 | " " | 600 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Belle river, P.E.I. | 2,139 55 | 855 10 | 72 76 | 832 88 | ..... | 5 00 | 135 45 | 24 93 | 2,629 27 | 2,062 18 | 3,355 00 | 143 03 | 12,255 15 |
| Totals | 2,139 55 | 855 10 | 72 76 | 832 88 | ..... | 5 00 | 135 45 | 24 93 | 2,629 27 | 2,062 18 | 3,355 00 | 143 03 | 12,255 15 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Belle river, P.E.I. | June 22 | Oct. 26 | Mud, sticks, sand, clay, rock, boulders. | 17,002 | 1,102 | 567 30 | 21·595 | ·721 |
| Totals | ..... | ..... | ..... | 17,002 | 1,102 | 567 30 | 21·595 | ·721 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Curreat. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Belle river, P.E.I. | 45 00 | ..... | 159 30 | ..... | 249 00 | 30 00 | ..... | ..... | 1 30 | 1 00 | ..... |
| Totals, hours | 45 00 | ..... | 159 30 | ..... | 249 00 | 30 00 | ..... | ..... | 1 30 | 1 00 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Belle river, P.E.I. | ..... | 8 00 | 10 00 | ..... | 30 30 | 534 30 | |
| Totals, hours | ..... | 8 00 | 10 00 | ..... | 30 30 | 534 30 | |

General Remarks: Dredge put into commission at Belle river, P.E.I., on June 22; laid up for season at Malpeque, P.E.I., on Nov. 9, 1914.

## DREDGE, P.W.D. No. 12, PROVINCE OF NEW BRUNSWICK.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 22,466 | 16,085 | 8,966 | 28,551 | 5,495 | | | | | 81,563 |
| Class of material | | | | Sand, mud, clay. | Mud, clay, rock, gravel | Clay, rock, gravel. | Clay, sand, mud, gravel | Sand, gravel rock, mud. | | | | | |
| Total possible dredging time hrs | | | | 352 00 | 470 00 | 420 00 | 550 00 | 210 00 | | | | | 2,002 00 |
| Total time lost hrs | | | | 92 30 | 152 30 | 207 30 | 181 00 | 102 30 | | | | | 736 00 |
| Hours actually dredging | | | | 259 30 | 317 30 | 212 30 | 369 00 | 107 30 | | | | | 1,266 00 |
| C.yds. handled per hour | | | | 86 57 | 50 66 | 41 72 | 77 37 | 51 12 | | | | | 64 43 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 211 20 | 947 91 | 998 99 | 768 31 | 974 72 | 413 56 | | | | | 4,314 69 |
| Fuel, Coal and Oil | | | 127 36 | 1,131 00 | 1,176 50 | 1,196 00 | 1,176 50 | 455 00 | | | | | 5,262 36 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 9 02 | 71 00 | 355 67 | 399 75 | 372 75 | 346 20 | 164 32 | | 10 31 | | | 1,729 02 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 60 97 | 0 67 | 19 20 | 52 21 | 328 69 | 306 45 | 49 91 | 44 12 | | 0 68 | | | 862 90 |
| Stores (General | 31 35 | | | | 1 50 | 1 50 | | 42 42 | | 2 40 | | | 79 17 |
| Repairs (Material | 590 37 | 285 39 | 503 14 | 311 03 | 450 21 | 277 69 | 480 81 | 153 55 | 14 05 | 379 95 | | | 3,446 19 |
| Repairs (Wages | 389 66 | 438 17 | 364 80 | | | 229 50 | | 472 76 | 115 97 | 100 00 | 100 00 | 106 77 | 2,317 63 |
| Rental of tugs | | | | | 2,637 00 | 1,273 75 | 1,430 25 | 967 00 | | | | | 6,308 00 |
| Contingencies | | | 1 50 | 3 60 | 9 35 | 8 71 | 3 15 | 24 60 | | 0 30 | | | 51 21 |
| Total Expenses | 1,072 35 | 733 25 | 1,298 20 | 2,801 42 | 6,001 99 | 4,434 66 | 4,461 54 | 2,737 33 | 130 02 | 493 64 | 100 00 | 106 77 | 24,371 17 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

**Department Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|

**Rented Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Lillie* | July 1. | | Indiantown to Swan Creek | 100 00 |
| *Smith Bros* | July 2. | Aug. 4. | Dingee Creek | 1,347 50 |
| | Aug. 5. | Oct. 3. | Grimross Canal | 2,905 75 |
| | Oct. 4. | Nov. 20. | Dykeman's Shoal | 1,874 75 |
| Stmr. *Leader* | Nov. 18. | Nov. 20. | Hampstead to St. John | 80 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Dingee Creek and Shoal, N.B. | 1,007 16 | 1,229 08 | ..... | 403 75 | ..... | ..... | 201 41 | 18 59 | 804 40 | 545 06 | 1,467 50 | 11 90 | 5,688 85 |
| Grimross Canal, N.B. | 1,995 48 | 2,433 33 | ..... | 799 28 | ..... | ..... | 399 07 | 36 71 | 1,593 83 | 1,071 70 | 2,917 50 | 23 71 | 11,270 61 |
| Dykeman's Shoal, N.B. | 1,312 05 | 1,599 95 | ..... | 525 99 | ..... | ..... | 262 42 | 23 87 | 1,047 96 | 700 87 | 1,923 00 | 15 60 | 7,411 71 |
| Totals | 4,314 69 | 5,262 36 | ..... | 1,729 02 | ..... | ..... | 862 90 | 79 17 | 3,446 19 | 2,317 63 | 6,308 00 | 51 21 | 24,371 17 |

| Expenses Working at | Time Working. | | Kind of material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Dingee Creek and Shoal, N.B. | July 8 | Aug. 4 | Sand, mud, clay | 27,689 | 442 | 295 30 | 19·251 | ·205 |
| Grimross Canal, N.B. | Aug. 8 | Oct. 3 | Mud, rock, gravel | 21,088 | 910 | 585 30 | 19·250 | ·534 |
| Dykeman's Shoal, N.B. | Oct. 9 | Nov. 14 | Sand, gravel, rock | 32,786 | 650 | 385 00 | 19·250 | ·226 |
| Totals | | | | 81,563 | 2,002 | 1,266 00 | 19·250 | ·299 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Shifting Anchors and Swinging Wire. | Shifting Land Pipes and Pontoons. | Rubbers on Pontoons | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Dingee Creek and Shoal, N.B. | 14 30 | 44 00 | 25 30 | 48 30 | 5 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| Grimross Canal, N.B. | 203 00 | 50 00 | 17 30 | 17 00 | 5 00 | 10 00 | ..... | ..... | 14 00 | 1 00 | ..... |
| Dykeman's Shoal, N.B. | 27 30 | 13 30 | 26 00 | 64 00 | 10 30 | 20 00 | ..... | ..... | 75 00 | ..... | ..... |
| Totals, hours | 245 00 | 107 30 | 69 00 | 129 30 | 20 30 | 30 00 | ..... | ..... | 89 00 | 1 00 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Dingee Creek and Shoal, N.B. | 3 00 | 1 00 | ..... | ..... | 5 00 | 146 30 | |
| Grimross Canal, N.B. | ..... | 4 00 | ..... | ..... | 3 00 | 324 30 | |
| Dykeman's Shoal, N.B. | 6 00 | ..... | ..... | 4 00 | 18 30 | 265 00 | |
| Totals, hours | 9 00 | 5 00 | ..... | 4 00 | 26 30 | 736 00 | |

General Remarks: Dredge put into commission at Dingee Shoal, N.B., on July 8; laid up for season at St. John, N.B., on Nov. 20, 1914

DREDGE, P.W.D. No. 13, PROVINCE OF NEW BRUNSWICK.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | 1,569 | 6,215 | 2,538 | | | | | | 10,322 |
| Class of material | | | | | Mud, sand, rock, clay. | Rock, mud, clay. | Rock, clay, | | | | | | |
| Total possible dredging time ..... hrs | | | 20 00 | 260 00 | 260 00 | 260 00 | 150 00 | | | | | | 950 00 |
| Total time lost ..... hrs | | | 20 00 | 260 00 | 223 30 | 151 30 | 111 30 | | | | | | 766 30 |
| Hours actually dredging | | | | | 36 30 | 108 30 | 38 30 | | | | | | 183 30 |
| C.yds. handled per hour | | | | | 42·99 | 57·28 | 65·92 | | | | | | 56·25 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 234 68 | 1,928 65 | 1,358 30 | 936 80 | 782 30 | | | | | | 5,240 73 |
| Fuel, Coal and Oil | | | 233 45 | 1,452 24 | 308 00 | 1,199 84 | 368 20 | | | | | | 3,561 73 |
| Water | | | 10 00 | 28 15 | 15 00 | 102 16 | 81 00 | | | | | | 236 31 |
| Subsistence | | | 86 00 | 785 35 | 546 86 | 311 09 | 271 60 | | | | | | 2,000 90 |
| Wharfage | | | | | 5 00 | | | | | | | | 5 00 |
| Pilotage | | | 3 20 | 72 40 | 4 19 | 15 00 | | | | | | | 94 79 |
| Stores / Machinery | | | 72 02 | 174 80 | 907 19 | 775 59 | 997 86 | 137 06 | | | | 713 90 | 3,078 42 |
| Stores \ General | | | 4 00 | 56 67 | 18 12 | 19 89 | 21 37 | | | | | | 120 05 |
| Repairs / Material | | | | 386 62 | 702 30 | 510 89 | 2,004 07 | 464 38 | 1,343 14 | 17 85 | 21 09 | 127 60 | 5,577 94 |
| Repairs \ Wages | | | | 243 28 | 318 42 | 216 41 | 573 72 | 513 76 | 320 65 | 107 50 | 115 04 | 118 76 | 2,528 14 |
| Rental of tugs | | | | | | 72 50 | | | | | | | 72 50 |
| Contingencies | | | 6 40 | 55 53 | 140 02 | 41 53 | 37 56 | 25 53 | | | | 13 07 | 325 64 |
| Total Expenses | | | 649 75 | 5,183 69 | 4,329 40 | 4,201 70 | 5,137 68 | 1,140 73 | 1,663 79 | 125 35 | 136 73 | 273 33 | 22,842 15 |

DETAILS OF TUG SERVICE.—Tugs in attendance and included in these operations.

DEPARTMENT TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Helena* | June 26 | July 30 | St. John to Montreal and return to Buctouche, N.B. | 2,262 42 |
| Tug *Lisgar* | June 23 | Aug. 14 | Port Hawkesbury to Montreal and return | 3,264 77 |
| Tug *Sogenada* | Aug. 18 | Oct. 30 | Buctouche, N.B. | 2,823 43 |

RENTED TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Maggie M* | July 30 | | Towing dredge and scow from outside harbour to Buctouche wharf | 40 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. |
| Buctouche, N.B | 5,240 73 | 3,561 73 | 236 31 | 2,000 90 | 5 00 | 94 79 | 3,078 42 | 120 05 | 5,577 94 | 2,528 14 | 72 50 | 325 64 | 22,842 15 |
| Totals | 5,240 73 | 3,561 73 | 236 31 | 2,000 90 | 5 00 | 94 79 | 3,078 42 | 120 05 | 5,577 94 | 2,528 14 | 72 50 | 325 64 | 22,842 15 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Buctouche, N.B | Aug. 20 | Oct. 16 | Mud, sand, rock & clay | 10,322 | 950 | 183-30 | 124-48 | 2-212 |
| Totals | | | | 10,322 | 950 | 183-30 | 124-48 | 2-212 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Buctouche, N.B | 79 00 | 2 00 | 125 00 | ..... | ..... | 20 00 | 3 30 | ..... | 489 30 | 6 30 | 5 00 |
| Totals, hours | 79 00 | 2 00 | 125 00 | ..... | ..... | 20 00 | 3 30 | ..... | 489 30 | 6 30 | 5 00 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Buctouche, N.B | ..... | ..... | 10 00 | ..... | 26 00 | 766 30 | Possible time taken from time dredge started to prepare to tow to Buctouche, N.B., June 29th–Oct. 16th. |
| Totals, hours | ..... | ..... | 10 00 | ..... | 26 00 | 766 30 | |

General Remarks: Dredge put into commission at St. Anne de Bellevue, on June 29th; laid up for season at Buctouche, N.B., on Oct. 16, 1914.

## DREDGE, P.W.D. No. 14, PROVINCE OF NOVA SCOTIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 132 | 1,015 | 1,920 | 2,220 | 3,120 | 1,040 | | | | | 9,447 |
| Class of material | | | Mud | Mud | Mud | Mud | Mud | Mud | | | | | |
| Total possible dredging time, hrs | | | 20 00 | 260 00 | 260 00 | 260 00 | 270 00 | 140 00 | | | | | 1,210 00 |
| Total time lost, hrs | | | 9 30 | 231 00 | 189 00 | 189 30 | 184 00 | 113 00 | | | | | 916 00 |
| Hours actually dredging | | | 10 30 | 29 00 | 71 00 | 70 30 | 86 00 | 27 00 | | | | | 294 00 |
| C.yds. handled per hour | | | 12 57 | 35 00 | 27 04 | 31 49 | 36 28 | 38 52 | | | | | 32 13 |

### Details of Expenditure by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Wages | | | 141 34 | 406 59 | 410 00 | 410 00 | 408 88 | 335 00 | | | | | 2,111 81 |
| Fuel, Coal and Oil | | | 63 96 | 140 22 | | 158 05 | 68 88 | | | | | | 431 11 |
| Water | | | | | | | 211 00 | | 95 00 | | | | 306 00 |
| Subsistence | | | 43 00 | 110 35 | 138 00 | 120 00 | 123 50 | 95 00 | | | | | 629 85 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | | | | | | | | | | | | | |
| Stores (General | 12 80 | 58 45 | 100 26 | 48 52 | 103 46 | 163 55 | 71 11 | 39 68 | | | | | 597 83 |
| Repairs (Material | 2 50 | | 2 50 | | | 4 40 | | | 0 30 | | | | 9 70 |
| Repairs (Wages | 378 69 | 119 48 | 299 47 | 270 36 | 46 06 | 68 53 | 67 11 | | 103 71 | | | 25 50 | 1,378 91 |
| Rental of tugs | 205 00 | 360 58 | 307 34 | | | | | 75 00 | 147 84 | 87 50 | 87 50 | 87 50 | 1,358 26 |
| Contingencies | | | | 17 20 | 11 42 | 14 01 | 27 05 | 4 25 | | | | | 73 93 |
| Total Expenses | 598 99 | 538 51 | 957 87 | 993 24 | 708 94 | 938 54 | 977 53 | 548 93 | 346 85 | 87 50 | 87 50 | 113 00 | 6,897 40 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| Tug *Mabel Reid* | June 27 | Nov. 17 | Fort Lawrence, N.S. | 3,191 99 | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
| Fort Lawrence, N.S. | 2,111 81 | 431 11 | 306 00 | 629 85 | ..... | ..... | 597 83 | 9 70 | 1,378 91 | 1,358 26 | ..... | 73 93 | 6,897 40 |
| Totals | 2,111 81 | 431 11 | 306 00 | 629 85 | ..... | ..... | 597 83 | 9 70 | 1,378 91 | 1,358 26 | ..... | 73 93 | 6,897 40 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Fort Lawrence, N.S. | June 29 | Nov. 17 | Mud | 9,447 | 1,210 | 294 | 23·460 | ·730 |
| Totals | ..... | ..... | ..... | 9,447 | 1,210 | 294 | 23·460 | ·730 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Fort Lawrence, N.S. | 68 00 | 28 00 | 24 00 | ..... | 489 00 | 20 00 | 55 30 | ..... | 37 00 | 37 30 | 48 30 |
| Totals, hours | 68 00 | 28 00 | 24 00 | ..... | 489 00 | 20 00 | 55 30 | ..... | 37 00 | 37 30 | 48 30 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Fort Lawrence, N.S. | 22 30 | 11 00 | 6 00 | 3 00 | 66 00 | 916 00 | |
| Totals, hours | 22 30 | 11 00 | 6 00 | 3 00 | 66 00 | 916 00 | |

General Remarks: Dredge put into commission at Fort Lawrence, N.S., on June 29; laid up for season at Amherst, N.S., on Nov. 17, 1914.

## DREDGE, RENTED. ("BEACON BAR") PROVINCE OF NOVA SCOTIA.

### Details of Material and Time by Months.

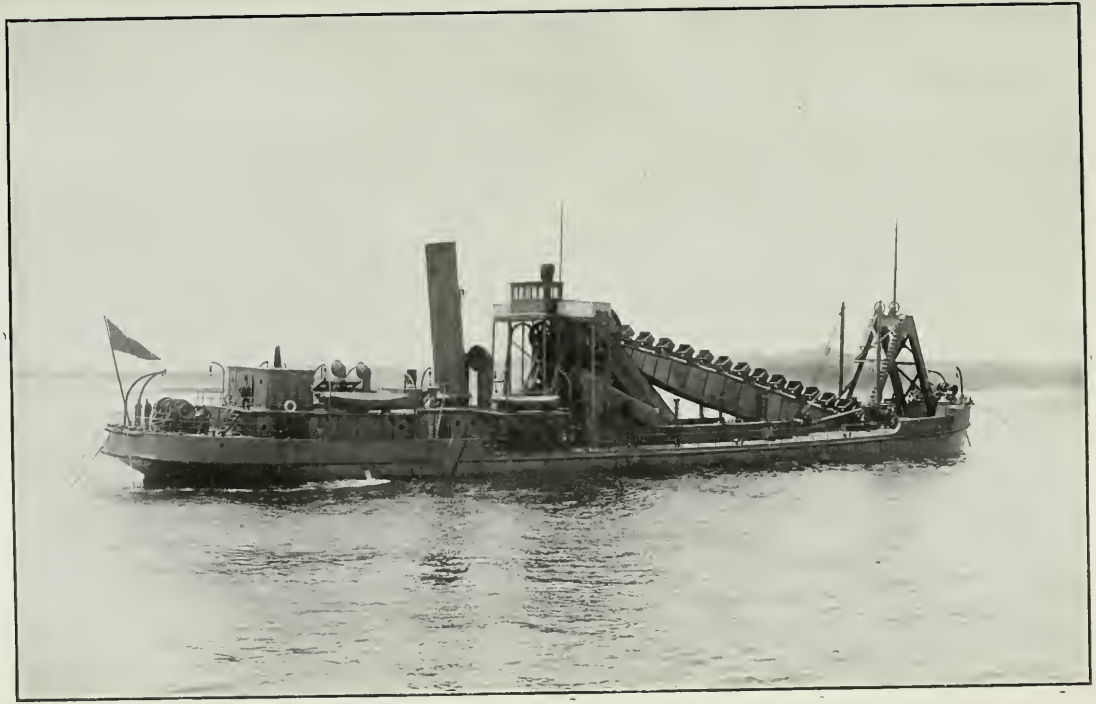
| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | | | | | | | | 10,600 | 10,600 |
| Class of material | | | | | | | | | | | | Hard pan & rock. | |
| Total possible dredging time | | | | | | | | | | | | 210 00 | 210 00 |
| Total time lost | | | | | | | | | | | | 34 00 | 34 00 |
| Hours actually dredging | | | | | | | | | | | | 176 00 | 176 00 |
| C.yds. handled per hour | | | | | | | | | | | | 60 23 | 60 23 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | | | | | | | 248 54 | 578 00 | 826 54 |
| Fuel, Coal and Oil | | | | | | | | | | | 41 25 | 281 73 | 322 98 |
| Water | | | | | | | | | | | 17 50 | 20 00 | 37 50 |
| Subsistence | | | | | | | | | | | 64 50 | 133 50 | 198 00 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | | | | | | | | | | | 10 00 | | 10 00 |
| Stores (General | | | | | | | | | | | 38 39 | 226 44 | 264 83 |
| Repairs (Material | | | | | | | | | | | | | |
| Repairs (Hire Dredge | | | | | | | | | | | | 20 39 | 20 39 |
| Towing Dredge | | | | | | | | | | | | 880 00 | 880 00 |
| Contingencies | | | | | | | | | | | | 950 00 | 950 00 |
| | | | | | | | | | | | | 3 39 | 3 39 |
| Total Expenses | | | | | | | | | | | 420 18 | 3,093 45 | 3,513 63 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| Tug *Sogenada* | Feb. 11. | Mar. 31. | Lunenburg, N.S. | 1,500 63 | | | | | |



Dredge "Fielding" No. 1, New Brunswick.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Towing Dredge. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Hire Dredge. | | | |
| | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Lunenburg, N.S | 826 54 | 322 98 | 37 50 | 198 00 | ..... | 10 00 | 264 83 | | 20 39 | 880 00 | 950 00 | 3 39 | 3,513 63 |
| Totals | 826 54 | 322 98 | 37 50 | 198 00 | ..... | 10 00 | 264 83 | ..... | 20 39 | 880 00 | 950 00 | 3 39 | 3,513 63 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Lunenburg, N.S | Mar. 8 | Mar. 31 | Hard pan and rock | 10,600 | 210 | 176 | 19·964 | ·331 |
| Totals | ..... | ..... | ..... | 10,600 | 210 | 176 | 19·964 | ·331 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Lunenburg, N.S | 9 30 | 2 30 | 4 00 | ..... | ..... | ..... | ..... | ..... | 5 30 | 11 00 | ..... |
| Totals, hours | 9 30 | 2 30 | 4 00 | ..... | ..... | ..... | ..... | ..... | 5 30 | 11 00 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Lunenburg, N.S. | ..... | ..... | ..... | ..... | 1 30 | 34 00 | Work not complete at end of fiscal year. |
| Totals, hours | ..... | ..... | ..... | ..... | 1 30 | 34 00 | |

General Remarks: Dredge put into Commission at Lunenburg, N.S., on March 8;

DREDGE, P.W.D. ("LOBNITZ No. 3") PROVINCES OF NEW BRUNSWICK AND NOVA SCOTIA

Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 940 | 3,796 | 3,759 | 3,115 | 1,518 | | 1,370 | 3,850 | 2,542 | 3,660 | 24,580 |
| Class of material | | | Rock | Rock | Rock | Rock | Rock | | Rock | Rock | Rock | Rock | |
| Total possible dredging time | | | 200 00 | 270 00 | 260 00 | 260 00 | 270 00 | 250 00 | 270 00 | 260 00 | 240 00 | 270 00 | 2,550 00 |
| Total time lost | | | 150 00 | 123 35 | 62 30 | 146 30 | 197 35 | 250 00 | 197 35 | 100 15 | 153 00 | 153 05 | 1,534 05 |
| Hours actually dredging | | | 50 00 | 146 25 | 197 30 | 113 30 | 72 25 | | 72 25 | 159 45 | 87 00 | 116 55 | 1,015 55 |
| C.yds. handled per hour | | | 18 80 | 25·92 | 19·03 | 27·80 | 20·96 | | | | | | |

Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 318 06 | 418 67 | 465 50 | 425 00 | 425 00 | 1,295 81 | 425 00 | 425 00 | 425 00 | 425 00 | 5,048 04 |
| Fuel, Coal and Oil | | | | 225 30 | 234 00 | 562 10 | 363 40 | 484 28 | | 373 39 | | 482 72 | 2,725 19 |
| Water | | | | 67 00 | 80 00 | 156 50 | 65 00 | 20 59 | 15 00 | 15 00 | 20 00 | 32 50 | 471 59 |
| Subsistence | | | 91 34 | 137 85 | 142 15 | 135 00 | 142 12 | 461 36 | 139 50 | 139 50 | 99 00 | 148 85 | 1,636 67 |
| Wharfage | | 5 00 | | | | | | 5 00 | | 15 00 | | | 25 00 |
| Pilotage | | | | | | | | 9 71 | | | | 36 00 | 45 71 |
| Stores Machinery | 60 95 | 12 93 | 32 02 | 86 42 | 1,873 14 | 245 58 | 20 75 | 114 57 | 2 71 | 36 88 | | 78 20 | 2,564 15 |
| Repairs General | 2 00 | | 8 00 | 2 65 | | 5 40 | 5 40 | 13 77 | 2 40 | | 22 60 | 6 75 | 68 97 |
| Repairs Material | 605 64 | 189 74 | 898 41 | 158 14 | | 46 15 | 213 90 | 39 94 | | 51 87 | 27 00 | 32 48 | 2,263 27 |
| Repairs Wages | 413 11 | 484 48 | 100 45 | 28 79 | | | | | | | | | 1,026 83 |
| Rental of tugs | | | | 793 50 | 897 00 | 1,759 50 | 828 00 | | 250 00 | | 10 00 | 10 00 | 4,548 00 |
| Contingencies | | | | 12 55 | 196 10 | 1 75 | 1 25 | | | | 2 82 | 1 85 | 216 32 |
| Total Expenses | 1,081 70 | 692 15 | 1,448 28 | 1,930 87 | 3,887 89 | 3,336 98 | 2,064 82 | 2,445 03 | 834 61 | 1,056 64 | 606 42 | 1,254 35 | 20,639 74 |

Details of Tug Service.—Tugs in attendance and included in these operations.

Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| *Tug Lisgar* | Oct. 27 | Nov. 27 | Towing from Buctouche to Halifax | 1,599 20 |
| Tug *Sogenada* | Nov. 1 | Nov. 27 | Towing from Buctouche to Halifax | 1,084 63 |

Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Maggie M* | June 4 | Oct. 29 | Buctouche, N.B | 4,278 00 |
| S.S. *Reliable* | Dec. 17 | Dec. 18 | Halifax to Lunenburg, N.S | 250 00 |
| S.S. *Mascotte* | Dec. 18 and 24 | | Lunenburg, N.S | 10 00 |
| S.S. *Mascotte* | Feb. 13 and 22 | | Lunenburg, N.S | 10 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Buctouche, N.B | 2,052 23 | 1,384 80 | 368 50 | 648 46 | 5 00 | ..... | 1,464 13 | 23 45 | 1,291 38 | 585 62 | 4,278 00 | 211 65 | 12,313 22 |
| Halifax, N.S | 293 03 | 132 49 | 10 00 | 96 00 | 1 90 | 4 47 | 107 02 | 4 52 | 94 85 | 43 47 | 26 24 | 36 | 814 35 |
| Lunenburg, N.S | 2,702 78 | 1,207 90 | 93 09 | 892 21 | 18 10 | 41 24 | 993 00 | 41 00 | 877 04 | 397 74 | 243 76 | 4 31 | 7,512 17 |
| Totals | 5,048 04 | 2,725 19 | 471 59 | 1,636 67 | 25 00 | 45 71 | 2,564 15 | 68 97 | 2,263 27 | 1,026 83 | 4,548 00 | 216 32 | 20,639 74 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Buctouche, N.B | June 15 | Oct. 26 | Rock | 13,158 | 1,230 | 579 50 | 21·236 | ·936 |
| Halifax, N.S | Nov. 26 | Dec. 16 | Rock | 822 | 180 | 42 40 | 19·092 | ·990 |
| Lunenburg, N.S | Dec. 18 | Mar. 31 | Rock and hard pan | 10,600 | 1,140 | 393 25 | 19·094 | ·709 |
| Totals | | | | 24,580 | 2,550 | 1,015 55 | 20·316 | ·839 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Buctouche, N.B | 62 35 | 15 15 | 335 10 | ..... | 60 00 | 30 00 | ..... | ..... | 46 40 | 16 00 | 1 50 |
| Halifax, N.S | 6 30 | 40 00 | 25 00 | ..... | ..... | ..... | ..... | ..... | 40 00 | 2 00 | 1 00 |
| Lunenburg, N.S | 157 40 | 22 30 | 72 00 | 5 30 | ..... | 20 00 | ..... | ..... | 290 00 | 20 50 | 6 00 |
| Totals, hours | 226 45 | 77 45 | 432 10 | 5 30 | 60 00 | 50 00 | ..... | ..... | 376 40 | 38 50 | 8 50 |

| Time Lost at | Anchors. | | Inspecting Boilers. | Traffic. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Running | Shifting. | | | | | |
| Buctouche, N.B | 8 30 | 64 10 | 10 00 | ..... | ..... | 650 10 | Cheque received by Department from Foley Bros., amounting to $1,666 for work done at Halifax Harbour. |
| Halifax, N.S | ..... | 10 50 | ..... | ..... | 12 00 | 137 20 | Lobnitz not finished working at end of fiscal year. |
| Lunenburg, N.S | ..... | 98 00 | 1 30 | 40 05 | 12 30 | 746 35 | |
| Totals, hours | 8 30 | 173 00 | 41 30 | 40 05 | 24 30 | 1,534 05 | |

General Remarks: Dredge put into commission at Buctouche, N.B., on June 8th;

## DREDGE, P.W.D. No. 15, PROVINCE OF NOVA SCOTIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | | | 900 | 1,488 | 708 | | | | 3,096 |
| Class of material | | | | | | | Mud, gravel | Mud, gravel | Mud, gravel | | | | |
| Total possible dredging time ..... hrs | | | | | | | 150 | 250 | 160 | | | | 560 |
| Total time lost hrs | | | | | | | 57½ | 98 | 90 | | | | 245½ |
| Hours actually dredging | | | | | | | 92½ | 152 | 70 | | | | 314½ |
| C.yds. handled per hour | | | | | | | 9·7 | 9·8 | 10·1 | | | | 9·84 |

### Details of Expenditure by Months

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
| Wages | | | | | | | | 274 25 | 489 00 | 311 48 | | 12 00 | 1,086 73 |
| Fuel, Coal and Oil | | | | | | | | | | | | | |
| Water | | | | | | | | | | | | | |
| Subsistence | | | | | | | | | | 9 00 | | | 9 00 |
| Wharfage | | | | | | | | 5 00 | 5 00 | 5 00 | | | 15 00 |
| Pilotage | | | | | | | | | | | | | |
| Stores / Machinery | | | | | | | | 94 51 | 145 25 | 48 40 | | | 288 16 |
| Repairs / General | | | | | | | | 0 25 | | | | | 0 25 |
| Repairs / Material | | | | | | | | 0 40 | | 13 80 | | | 14 20 |
| Repairs / Wages | | | | | | | | | | | | 48 00 | 48 00 |
| Rental of tugs | | | | | | | | 122 50 | 123 00 | 63 75 | | | 309 25 |
| Contingencies | | | | | | | | 12 75 | 16 00 | 14 00 | | 8 00 | 50 75 |
| Total Expenses | | | | | | | | 509 66 | 778 25 | 465 43 | | 68 00 | 1,821 34 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
| | | | | $ cts | | | | | $ cts |
| | | | | | *I.X.L* | Oct. 17. | Dec. 26 | Little Harbour | 262 50 |
| | | | | | Small Gasoline Boat | 2½ days | | Little Harbour | 6 75 |
| | | | | | Boehner Bros. Tug | Oct. 13. | | Towing to Cherry Hill | 40 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. |
| Little Harbour | 1,086 73 | | | 9 00 | 15 00 | | 288 16 | 0 25 | 14 20 | 48 00 | 309 25 | 50 75 | 1,821 34 |
| Totals | 1,086 73 | | | 9 00 | 15 00 | | 288 16 | 0 25 | 14 20 | 48 00 | 309 25 | 50 75 | 1,821 34 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Little Harbour | Oct. 15 | Dec. 18 | Mud, gravel | 3,096 | 560 | 314½ | $5·791 | ·588 |
| Totals | | | | 3,096 | 560 | 314½ | $5·791 | ·588 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Little Harbour | 54½ | 43 | 108 | 10 | | | | | 10 | 1 | |
| Totals, hours | 54½ | 43 | 108 | 10 | | | | | 10 | 1 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Little Harbour | 19 | | | | | 245½ | |
| Totals, hours | 10 | | | | | 245½ | |

General Remarks: Dredge put into commission at Little Harbour, on Oct. 15, 1914; laid up for season at Little Harbour on June 2.

## DREDGE, P.W.D No. 13, PROVINCE OF ONTARIO AND QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 2,690 | | | | | | | | | | 2,690 |
| Class of material | | | Rock, hard-pan, boulders | | | | | | | | | | |
| Total possible dredging time ....hrs | | | 240 | | | | | | | | | | 240 |
| Total time lost ....hrs | | | 120 | | | | | | | | | | 120 |
| Hours actually dredging | | | 120 | | | | | | | | | | 120 |
| C.yds. handled per hour | | | 22½ | | | | | | | | | | 22½ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 99 36 | 599 35 | 55 82 | | | | | | | | | 754 53 |
| Fuel, Coal and Oil | | 5 01 | | | | | | | | | | | 5 01 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 41 94 | 189 16 | | | | | | | | | | 231 10 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores { Machinery | | | 98 87 | 46 06 | 16 62 | | | | | | | | 161 55 |
| Stores { General | | 0 92 | | | | | | | | | | | 0 92 |
| Repairs { Material | | 54 24 | 5 52 | 8 32 | | | | | | | | | 68 08 |
| Repairs { Wages | 17 00 | 15 45 | 427 12 | | | | | | | | | | 459 57 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | | 31 90 | 6 95 | 6 10 | | | | | | | | 44 95 |
| Total Expenses | 17 00 | 216 92 | 1,351 92 | 117 15 | 22 72 | | | | | | | | 1,725 71 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts | Name of Tug. | Employed. From / To | Locality. | Expense. $ cts. |
| *Fashion* | June 1 | June 3 | Hudson | | | | | |
| *Blanche* | " 9 | " 27 | Ste. Annes | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. |
| Hudson | 157 20 | 1 05 | ..... | 48 15 | ..... | ..... | 33 66 | 0 20 | 14 18 | 95 75 | ..... | 9 37 | 359 56 |
| Ste. Anne de Bellevue | 597 33 | 3 96 | ..... | 182 95 | ..... | ..... | 127 89 | 0 72 | 53 90 | 363 82 | ..... | 35 58 | 1,366 15 |
| Totals | 754 53 | 5 01 | ..... | 231 10 | ..... | ..... | 161 55 | 0 92 | 68 08 | 459 57 | ..... | 44 95 | 1,725 71 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Hudson | June 1 | June 3 | Rock | 65 | 30 | 25 | 14·3824 | $5·5316 |
| Ste. Anne de Bellevue | " 9 | " 27 | Hardpan, boulders | 2,625 | 210 | 95 | 14·3805 | ·5204 |
| Totals | | | | 2,690 | 240 | 120 | $14·3808 | ·6415 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Hudson | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 4 | ..... | ..... | ..... |
| Ste. Anne de Bellevue | 69 | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 28 | 9 | ..... |
| Totals, hours | 69 | 1 | ..... | ..... | ..... | ..... | ..... | 8 | 28 | 9 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Hudson | ..... | ..... | ..... | ..... | ..... | 5 | |
| Ste. Anne de Bellevue | 2 | ..... | ..... | ..... | 3 | 115 | |
| Totals, hours | 2 | ..... | ..... | ..... | 3 | 120 | |

General Remarks: Dredge put into commission at Ottawa, on May 18; left for Maritime Provinces on June 29.

# QUEBEC.

## DREDGE, P.W.D. No. 4, PROVINCE OF QUEBEC

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 18,000 | 24,600 | 17,600 | 24,168 | | | | | | 84,368 |
| Class of material | | | | Sand... | Sand..... | Sand. | Sand, mud | | | | | | |
| Total possible dredging time.....hrs | | | | 210 | 260 | 260 | 270 | | | | | | 1,000 |
| Total time lost.....hrs | | | | 19 | 25 | 91 | 158 | | | | | | 193 |
| Hours actually dredging | | | | 191 | 235 | 169 | 212 | | | | | | 807 |
| C.yds. handled per hour | | | | 94 | 104½ | 104 | 114 | | | | | | 104½ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | 464 72 | 1,235 46 | 735 25 | 884 00 | 844 83 | 456 84 | | | | 4,621 10 |
| Fuel, Coal and Oil | | | | | 748 81 | 775 08 | 850 01 | 87 51 | | | 47 90 | 19 70 | 2,529 91 |
| Water | | 2 00 | | 61 24 | 83 43 | 86 73 | 80 70 | 101 66 | | 1 00 | | | 416 76 |
| Subsistence | | 98 09 | 14 98 | 215 14 | 400 39 | 292 30 | 305 36 | 267 30 | 43 35 | | 28 03 | 1 98 | 1,666 92 |
| Wharfage | | | | | | | | 10 00 | | | | | 10 00 |
| Pilotage | | | | | | | | | 17 00 | | | | 17 00 |
| Stores { Machinery | | 92 01 | 126 06 | 92 65 | 108 84 | 165 75 | 314 30 | 23 10 | 1 00 | | 38 22 | 62 34 | 1,024 27 |
| Stores { General | | 134 26 | 25 63 | 44 54 | 1 30 | | 43 30 | 28 30 | | | | 12 24 | 289 57 |
| Repairs { Material | 305 21 | 200 27 | 87 71 | | 201 54 | 948 50 | | 92 70 | 277 91 | 1,266 46 | 263 81 | 363 56 | 4,007 67 |
| Repairs { Wages | 508 92 | 706 20 | 1,172 13 | 156 25 | 20 46 | 277 00 | 57 15 | 91 30 | 100 00 | 429 31 | 453 64 | 482 38 | 4,454 74 |
| Rental of tugs | | | | | | | | 30 00 | 800 00 | | | | 830 00 |
| Contingencies | | 89 55 | 2 24 | 13 62 | 7 04 | 3 70 | 14 38 | 94 11 | 37 63 | 13 83 | 31 68 | 17 41 | 324 59 |
| Total Expenses | 814 13 | 1,322 38 | 1,428 75 | 1,047 56 | 2,807 27 | 3,284 31 | 2,549 20 | 1,670 81 | 1,733 73 | 1,710 60 | 863 28 | 959 61 | 20,191 63 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| *Rona* | All season | | | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| S.S. *Hiawatha* | Nov. 12 | | Towing from pier No. 1 to Marine Slip | 15 00 |
| S.S. *Hiawatha* | Nov. 25. | | Towing from Marine Slip to Market wharf | 15 00 |
| *Lady Sybil* | Dec. 3. | | Towing from Amherst, Magdalen Is. to Pictou | 800 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Amherst, Magdalen Is. | 4,621 10 | 2,529 01 | 416 76 | 1,666 92 | 10 00 | 17 00 | 1,024 27 | 289 57 | 4,007 67 | 4,454 74 | 830 00 | 324 59 | 20,191 63 |
| Totals | 4,621 10 | 2,529 01 | 416 76 | 1,666 92 | 10 00 | 17 00 | 1,024 27 | 289 57 | 4,007 67 | 4,454 74 | 830 00 | 324 59 | 20,191 63 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Amherst, Magdalen Is. | July 8 | Oct 31 | Sand, mud | 84,368 | 1,000 | 807 | $25·0206 | ·2393 |
| Totals | | | | 84,368 | 1,000 | 807 | $25·0206 | ·2393 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Amherst, Magdalen Is. | 77 | 8 | 60 | | | 20 | | | | 17 | |
| Totals, hours | 77 | 8 | 60 | | | 20 | | | | 17 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Amherst, Magdalen Is. | 8 | 3 | | | | 193 | |
| Totals, hours | 8 | 3 | | | | 193 | |

General Remarks: Dredge put into Commission at Amherst, M.I., on July 4th; Laid up for season at Pictou, N.S., on Dec. 17th.

## DREDGE, P.W.D. No. 101, PROVINCE OF QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | 630 | 1,541 | 2,104 | 1,507 | | | | | 5,782 |
| Class of material | | | | | Sand, rock. | Rock, gravel | Rock, clay, gravel. | Clay | | | | | |
| Total possible dredging time...hrs | | | | | 190 | 260 | 270 | 120 | | | | | 840 |
| Total time lost ....hrs | | | | | 42 | 63 | 64 | 22 | | | | | 191 |
| Hours actually dredging | | | | | 148 | 197 | 206 | 98 | | | | | 649 |
| C.yds. handled per hour | | | | | 4¼ | 7⅞ | 10¼ | 15⅓ | | | | | 8⅓ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | 187 40 | 796 75 | 1,092 50 | 1,159 73 | 893 08 | | | | 4,129 46 |
| Fuel, Coal and Oil | | | | | | | 472 52 | 206 04 | 207 73 | | | | 886 29 |
| Water | | | | | | | | | | | | | |
| Subsistence | 60 | | | | | 0 40 | 2 02 | | | | | | 3 02 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 23 37 | | | | | 30 87 | 222 92 | 17 37 | | | | | 294 53 |
| Stores (General | 131 47 | 24 38 | | | | 275 52 | 217 00 | 401 00 | | | | | 1,049 37 |
| Repairs (Material | 53 10 | | | | | 25 00 | | 132 14 | 33 75 | 38 64 | | | 282 63 |
| Repairs (Wages | 609 25 | | 50 00 | 50 00 | 27 78 | | 104 60 | 36 52 | 53 17 | 275 36 | 144 46 | 196 76 | 1,547 90 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 13 20 | | | | | | 29 60 | 7 10 | 9 20 | 16 50 | | | 75 60 |
| Total Expenses | 830 99 | 24 38 | 50 00 | 50 00 | 215 18 | 1,128 54 | 2,141 16 | 1,959 90 | 1,196 93 | 330 50 | 144 46 | 196 76 | 8,268 80 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | $ cts | | From | To | | $ cts. |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts | $ cts. |
| St. Louis de Gonzague, Que | 4,129 46 | 886 29 | ..... | 3 02 | ..... | ..... | 294 53 | 1,049 37 | 282 63 | 1,547 90 | ..... | 75 60 | 8,268 80 |
| Totals | 4,129 46 | 886 29 | ..... | 3 02 | ..... | ..... | 294 53 | 1,049 37 | 282 63 | 1,547 90 | ..... | 75 60 | 8,268 80 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| St. Louis de Gonzague, Que | Aug. 10 | Nov. 14 | Sand, rock, clay | 5,782 | 840 | 649 | $12·7408 | $1 43 |
| Totals | ..... | ..... | ..... | 5,782 | 840 | 649 | $12·7408 | $1 43 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| St. Louis de Gonzague | 132 | ..... | 10 | ..... | ..... | 20 | ..... | ..... | ..... | ..... | 20 |
| Totals, hours | 132 | ..... | 10 | ..... | ..... | 20 | ..... | ..... | ..... | ..... | 20 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscelluneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| St. Louis de Gonzague | ..... | ..... | ..... | 5 | 4 | 191 | |
| Totals, hours | ..... | ..... | ..... | 5 | 4 | 191 | |

General Remarks: Dredge overcasting all season. No tug in attendance. Laid up for season at St. Louis de Gonzague on Nov. 30, 1914.

## DREDGE, P. W. D. No. 102, PROVINCE OF QUEBEC

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 3,030 | 4,085 | 1,952 | 1,442 | 3,876 | 1,218 | | | | | 15,603 |
| Class of material | | | Clay. | Clay, hard-pan, boulders, gravel | Clay, hard-pan, boulders, gravel | Clay, boulders, gravel. | Hardpan, boulders, gravel. | Boulders, sand, gravel and timbers | | | | | |
| Total possible dredging time hrs | | | 80 | 270 | 260 | 260 | 270 | 150 | | | | | 1,290 |
| Total time lost hrs | | | 22½ | 115½ | 127 | 123 | 101 | 86 | | | | | 575 |
| Hours actually dredging | | | 57½ | 154½ | 133 | 137 | 169 | 64 | | | | | 715 |
| C.yds. handled per hour | | | 52½ | 26½ | 14⅔ | 10½ | 23 | 19 | | | | | 22 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 96 14 | 547 47 | 629 00 | 666 62 | 642 94 | 891 50 | 72 73 | | | | 3,546 40 |
| Fuel, coal and oil | | | | | 16 00 | 511 82 | 36 95 | 178 33 | | 9 45 | | 22 70 | 775 25 |
| Water | | | | | | | | | | | | | |
| Subsistence | | | 136 62 | 304 34 | 219 40 | 246 92 | 260 31 | 257 16 | 7 50 | 0 75 | 4 50 | 0 75 | 1,438 25 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 59 12 | 56 78 | 98 85 | 19 38 | 148 50 | 22 52 | 55 89 | 6 43 | 72 45 | | 10 79 | 114 21 | 664 92 |
| Repairs (General | 193 47 | 12 50 | 4 30 | | 97 54 | | 203 12 | 29 45 | | 1 50 | | 76 78 | 618 66 |
| Repairs (Material | 54 97 | 231 19 | 47 98 | 81 71 | 66 17 | 25 60 | 198 42 | 104 24 | 200 60 | 197 15 | 38 80 | 162 62 | 1,409 45 |
| Repairs (Wages | 397 83 | 414 20 | 312 70 | 106 58 | 69 03 | 186 53 | 174 41 | 127 80 | 146 89 | 120 34 | 92 50 | 204 34 | 2,353 15 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 8 61 | 24 72 | 7 20 | 13 95 | | 3 04 | | 55 61 | 12 25 | 36 99 | | 212 05 | 374 42 |
| Total expenses: | 714 00 | 739 39 | 703 79 | 1,073 43 | 1,245 64 | 1,663 05 | 1,572 04 | 1,650,52 | 512 42 | 366 18 | 146 59 | 793 45 | 11,180 50 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | To | Locality. | Expense. $ cts. | Name of Tug. | Employed. From | To | Locality. | Expenses. $ cts. |
| *Eileen* | All season | | | | | | | | |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| La Salette—Channel | 461 28 | 100 83 | ..... | 187 08 | ..... | ..... | 86 48 | 80 46 | 183 33 | 306 09 | ..... | 48 70 | 1,454 25 |
| Long Rapids—channel | 2,976 00 | 650 56 | ..... | 1,206 92 | ..... | ..... | 557 96 | 519 17 | 1,182 75 | 1,974 64 | ..... | 314 27 | 9,382 21 |
| Smith's Point | 69 44 | 15 18 | ..... | 28 16 | ..... | ..... | 13 03 | 12 11 | 27 60 | 46 08 | ..... | 7 33 | 218 93 |
| Devine's Point | 39 68 | 8 68 | ..... | 16 09 | ..... | ..... | 7 45 | 6 92 | 15 77 | 26 34 | ..... | 4 18 | 125 11 |
| Totals | 3,546 40 | 775 25 | ..... | 1,438 25 | ..... | ..... | 664 92 | 618 66 | 1,409 45 | 2,353 15 | ..... | 374 42 | 11,180 50 |

| Expenses working at | Time Working. | | Kind of Material. | No. C. yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| La Salette—Channel | June 23 | July 7 | Clay | 4,779 | 140 | 93 | $15·637 | ·3043 c. |
| Long Rapids | July 13 | Nov. 11 | Hardpan, clay, boulders, gravel | 10,374 | 1,087 | 600 | 15·637 | ·9043 |
| Smith's Point | Nov. 14 | Nov. 17 | Boulders, timber, sand, gravel. | 270 | 45 | 14 | 15·637 | ·8108 |
| Devine's Point | Nov. 18 | Nov. 19 | Boulders, timber, gravel | 180 | 18 | 8 | 15·638 | ·6950 |
| Totals | ..... | ..... | ..... | 15,603 | 1,290 | 715 | $15·637 | ·7165 |

## Explanation of Unavoidable Loss of Time.

| Time lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Blasting |
| La Salette—Channel | 4½ | ..... | 5 | ..... | ..... | 10 | ..... | ..... | 6 | 2 | ..... |
| Long Rapids | 82 | 13½ | 18½ | 2 | 2 | 20 | 53½ | 10 | 21 | 2 | 32 |
| Smith's Point | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | 17 | ..... | ..... |
| Devine's Point | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | 3 |
| Totals, hours | 86½ | 13½ | 26½ | 2 | 2 | 30 | 53¼ | 10 | 46 | 4 | 35 |

| Time lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Sounding. | | | | | |
| La Salette—Channel | 3 | 1½ | 10 | ..... | 5 | 47 | Outside service inspection included in expenditure |
| Long Rapids | 14 | 24 | ..... | 51½ | 141½ | 487 | |
| Smith's Point | 1 | ..... | ..... | ..... | 10 | 31 | |
| Devine's Point | ..... | 2 | ..... | ..... | 3 | 10 | |
| Totals, hours | 18 | 27½ | 10 | 51½ | 159½ | 575 | |

General Remarks: Dredge put into commission at Buckingham, Que., on June 17, 1914. Laid up for season at Buckingham, Que., on December 3, 1914.

## DREDGE, P.W.D No. 103, PROVINCE OF QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,041 | 1,346 | 2,778 | 2,830 | 3,774 | 2,263 | 675 | | | | | 14,707 |
| Class of material | | Clay | Stones, clay, gravel, rock, boulders, hardpan. | Stones, clay, gravel, rock, boulders, hardpan. | Rock, clay, gravel, sand, boulders, hardpan, stone. | Stones, clay, boulders, hardpan, gravel. | Boulders, gravel, hard pan, clay. | Boulders, gravel, clay. | | | | | |
| Total possible dredging time ..... hrs | | 100 | 260 | 270 | 260 | 260 | 270 | 140 | | | | | 1,560 |
| Total time lost. ..... hrs | | 61 | 127 | 70½ | 150 | 98¾ | 112¼ | 56 | | | | | 675½ |
| Hours actually dredging | | 39 | 133 | 199½ | 110 | 161¼ | 157¾ | 84 | | | | | 884¾ |
| C.yds. handled per hour | | 26¾ | 10 | 14 | 25¾ | 23⅓ | 14⅓ | 8 | | | | | 16¼ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 230 64 | 404 34 | 477 00 | 452 75 | 444 46 | 462 00 | 580 58 | 346 36 | | | 176 77 | 3,574 90 |
| Fuel, Coal and Oil | | 63 75 | 57 75 | | 353 59 | | 205 20 | 221 25 | | | | 514 69 | 1,416 23 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 68 24 | 204 24 | 173 50 | 182 65 | 209 80 | 230 70 | 292 50 | 75 00 | | | 49 09 | 1,485 72 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores { Machinery | 82 75 | 135 86 | 99 41 | 25 20 | 106 95 | 84 30 | 36 08 | 3 05 | | | | 193 16 | 766 76 |
| Stores { General | 60 89 | 8 27 | | | | | 4 65 | | | | | 142 41 | 216 22 |
| Repairs { Material | 196 79 | 245 99 | 357 05 | 140 71 | 7 81 | 25 60 | 309 49 | 122 99 | 18 97 | 493 18 | 151 66 | 417 95 | 2,488 19 |
| Repairs { Wages | 523 15 | 594 29 | 165 85 | 170 41 | 98 88 | 173 25 | 213 74 | 67 57 | 481 88 | 701 77 | 455 87 | 1,040 24 | 4,686 90 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 64 05 | 24 90 | 7 35 | | 26 30 | 26 06 | 2 60 | 66 91 | 19 00 | | 441 63 | 678 80 |
| Total Expenses.... | 863 58 | 1,411 09 | 1,313 54 | 994 17 | 1,202 63 | 963 71 | 1,487 92 | 1,290 54 | 989 12 | 1,213 95 | 607 53 | 2,975 94 | 15,313 72 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
| *Alva* | All season | | | | | | | | |
| *Delisle* | Sept. 26 | Oct. 2. | Longueuil B.C.B. | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Repairs. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts |
| Vaudreuil Riv., Quinchien | 169 75 | 67 25 | ..... | 70 56 | ..... | ..... | 36 41 | 10 27 | 118 15 | 222 55 | ..... | 32 23 | 727 17 |
| Senneville | 1,362 05 | 539 59 | ..... | 566 06 | ..... | ..... | 292 15 | 82 39 | 948 01 | 1,785 74 | ..... | 258 63 | 5,834 62 |
| D'Autray | 149 54 | 59 24 | ..... | 62 16 | ..... | ..... | 32 07 | 9 04 | 104 09 | 196 07 | ..... | 28 39 | 640 60 |
| Longueuil-Boating Club Basin | 1,162 00 | 460 34 | ..... | 482 91 | ..... | ..... | 249 24 | 70 27 | 808 77 | 1,523 43 | ..... | 220 64 | 4,977 60 |
| Longueuil R. & O. Wharf | 731 56 | 289 81 | ..... | 304 03 | ..... | ..... | 156 89 | 44 25 | 509 17 | 959 11 | ..... | 138 91 | 3,133 73 |
| Totals | 3,574 90 | 1,416 23 | ..... | 1,485 72 | ..... | ..... | 766 76 | 216 22 | 2,488 19 | 4,686 90 | ..... | 678 80 | 15,313 72 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Vaudreuil Riv., Quinchien | May 20 | June 1 | Clay | 1,161 | 110 | 42 | $17·3135 | ·6263c |
| Senneville | June 3 | Aug 10 | Boulders, hardpan, clay, stones, rock, gravel | 4,136 | 530 | 337 | $17·3134 | 1·4106 |
| D'Autray | Aug 10 | Aug 15 | Clay, sand | 1,584 | 120 | 37 | 17·3135 | ·4044 |
| Longueil-Boating Club Basin | Aug. 21 | Nov. 17 | Boulders, gravel, stones | 6,073 | 475 | 287½ | 17·3133 | ·8196 |
| Longueuil R. & O. Wharf | | | Hardpan, clay | 1,753 | 325 | 181 | 17·3134 | 1·7876 |
| Totals | | | | 14,707 | 1,560 | 884½ | $17·3134 | 1·0412 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Vaudreuil—Riv. Quinchien | 26 | .. | 9 | ..... | ..... | 10 | 1 | ..... | ..... | 3½ | ..... |
| Senneville | 89½ | 5 | 20½ | ..... | ..... | 10 | ..... | ..... | 3 | 10½ | ..... |
| D'Autray | 37½ | ½ | 1½ | ..... | ..... | ..... | ..... | ..... | 24 | 3 | ..... |
| Longueuil—Boating Club Basin | 56 | 7 | 13 | ..... | ..... | 10 | 1 | ..... | 20½ | 11 | ..... |
| Longueuil—R. & O. Wharf | 34½ | 10 | 41 | ..... | ..... | 10 | ..... | ..... | ..... | 4 | ..... |
| Totals, hours | 243½ | 22½ | 85 | ..... | ..... | 40 | 2 | ..... | 47½ | 32¼ | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Vaudreuil—Riv. Quinchien | 2 | 1¼ | ..... | ..... | 14½ | 68 | Dredge castover at Vaudreuil—413 cu. yds. |
| Senneville | 8½ | 11½ | ..... | ..... | 34½ | 193 | Dredge castover at Senneville—1,170 cu. yds. |
| D'Autray | 1½ | 7 | ..... | ..... | 8 | 83 | |
| Longueuil—Boating Basin | 5 | 10 | ..... | 4 | 50 | 187½ | Outside service inspection included in expenditure. |
| Longueuil—R. & O. Wharf | 1 | .. | ..... | ..... | 43½ | 144 | |
| Totals, hours | 18 | 30½ | ..... | 4 | 150½ | 675½ | |

General remarks: Dredge put into commission at Ottawa, Ont., on May 14, 1914; laid up for season at Ottawa, Ont., on Dec. 5, 1914. Tug *Delisle* attended dredge while tug *Altra* was being repaired at Montreal.

DREDGE, P.W.D. No. 105, PROVINCE OF ONTARIO.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 5,930 | 13,260 | 8,958 | 8,734 | 11,962 | 5,768 | | | | | 54,612 |
| Class of material | | | Mud | Mud, stone, clay, hard-pan, logs. | Mud, clay, stones, gravel, sand. | Sand, mud. | Sand, mud | Sand, mud. | | | | | |
| Total possible dredging time ..... hrs | | | 130 | 270 | 260 | 260 | 270 | 150 | | | | | 1,340 |
| Total time lost ..... hrs | | | 34 | 81 | 120 | 113 | 117 | 90 | | | | | 555 |
| Hours actually dredging | | | 96 | 189 | 140 | 147 | 153 | 60 | | | | | 785 |
| C.yds. handled per hour | | | 61⅞ | 70 | 64 | 59½ | 78¼ | 96 | | | | | 69¼ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
| Wages | | | 399 00 | 559 44 | 703 59 | 537 52 | 580 50 | 619 18 | 69 67 | | | | 3,468 90 |
| Fuel, Coal and Oil | | | | 291 22 | 488 35 | 266 42 | 553 46 | 316 47 | 122 93 | | | 19 70 | 2,058 55 |
| Water | | | | | | | | | | | | | |
| Subsistence | 1 80 | 3 00 | 119 18 | 200 78 | 178 24 | 179 94 | 196 25 | 178 00 | 33 50 | | | 9 75 | 1,100 44 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 148 99 | 1 85 | 50 13 | 40 23 | 43 67 | 201 77 | 92 39 | 1 60 | 7 82 | | | 62 34 | 650 79 |
| Stores (Generul | | 82 57 | | | | 23 85 | | 0 80 | 0 70 | | | 12 24 | 120 16 |
| Repairs (Material | 144 00 | 237 70 | 8,124 98 | 289 16 | 25 83 | | 129 48 | 23 70 | 2 30 | | | 26 03 | 9,003 18 |
| Repairs (Wages | 515 00 | 593 97 | 325 09 | 38 98 | 4 72 | 38 62 | 13 48 | | 80 64 | 100 00 | 192 69 | 246 21 | 2,149 40 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 6 90 | 39 33 | | | 59 12 | 47 37 | 7 43 | 3 50 | 26 15 | 9 80 | 9 20 | 670 56 | 879 36 |
| Total Expenses | 816 69 | 958 42 | 9,018 38 | 1,419 81 | 1,503 52 | 1,295 49 | 1,572 99 | 1,143 25 | 343 71 | 109 80 | 201 89 | 1,046 83 | 19,430 78 |

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
| | | | | $ cts | | | | | $ cts |
| *Sir John* | June 16. | Nov. 18. | South Bay, Newcastle, Bowmanville. | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. |
| South Bay, Ont. | 1,453 84 | 862 75 | ..... | 461 20 | ..... | ..... | 272 75 | 50 36 | 3,773 31 | 900 83 | ..... | 368 55 | 8,143 59 |
| Newcastle, Ont | 481 67 | 285 84 | ..... | 152 80 | ..... | ..... | 90 37 | 16 68 | 1,250 13 | 298 45 | ..... | 122 10 | 2,698 04 |
| Bowmanville, Ont | 1,533 39 | 909 96 | ..... | 486 44 | ..... | ..... | 287 67 | 53 12 | 3,979 74 | 950 12 | ..... | 388 71 | 8,589 15 |
| Totals | 3,468 90 | 2,058 55 | ..... | 1,100 44 | ..... | ..... | 650 79 | 120 16 | 9,003 18 | 2,149 40 | ..... | 879 36 | 19,430 78 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| South Bay, Ont | June 16 | Aug. 8 | Mud, clay, stones, hard-pan. | 22,018 | 470 | 329 | $24·7525 | ·3698 |
| Newcastle, Ont | Aug 17 | Sept. 2 | Sand, clay, mud, stones. | 6,750 | 210 | 109 | 24·7526 | ·3997 |
| Bowmanville, Ont | Sept. 8 | Nov. 18 | Sand, mud | 25,844 | 660 | 347 | 24·7525 | ·3323 |
| Totals | ..... | ..... | ..... | 54,612 | 1,340 | 785 | $24·7525 | ·3557 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on. | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs | Orders. | | Fuel. | Water. |
| South Bay, Ont | 5 | 5 | ..... | ..... | ..... | 10 | ..... | 4 | 32 | 22 | ... |
| Newcastle, Ont | ..... | ..... | 33 | ..... | ..... | ..... | ..... | ..... | 47 | 12 | ... |
| Bowmanville, Ont | 15 | ..... | 264 | ..... | ..... | 20 | ..... | 10 | 3 | ..... | ... |
| Totals, hours | 20 | 5 | 297 | ..... | ..... | 30 | ..... | 14 | 82 | 34 | ... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| South Bay, Ont | 9 | 20 | ..... | ..... | 34 | 141 | Places Dredge worked at South Bay. |
| Newcastle, Ont | ..... | ..... | ..... | ..... | 9 | 101 | Cu. yds. |
| Bowmanville, Ont | 1 | ..... | ..... | ..... | ..... | 313 | Waupoos 10,068 |
| | | | | | | | Port Milford 9,130 |
| | | | | | | | Farmer's Dock 2,258 |
| | | | | | | | Colliers Dock 562 |
| Totals, hours | 10 | 20 | ..... | ..... | 43 | 555 | Outside service inspection included in expenditure. |

General Remarks: Dredge put into commission at Picton, Ont. on May 11; laid up for season at Bowmanville, Ont., on Dec. 6, 1914.

DREDGE, P.W.D. No. 106, PROVINCE OF QUEBEC.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 3,633 | 4,859 | 3,108 | 2,543 | 2,143 | 2,184 | | | | | 18,470 |
| Class of material | | | Clay. | Clay. Stones. | Clay Stones. | Sand Clay. | Sand Clay. | Clay | | | | | |
| Total possible dredging time.....hrs | | | 240 | 270 | 260 | 260 | 270 | 140 | | | | | 1,440 |
| Total time lost.....hrs | | | 24 | 43 | 105 | 77 | 108½ | 71½ | | | | | 429 |
| Hours actually dredging | | | 216 | 227 | 155 | 183 | 161½ | 68½ | | | | | 1,011 |
| C.yds. handled per hour | | | 16¾ | 21¼ | 20 | 13¾ | 13¼ | 32 | | | | | 18¼ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 316 98 | 387 12 | 438 15 | 347 55 | 351 59 | 375 42 | 287 23 | | | 18 17 | 2,522 21 |
| Fuel, Coal and Oil | | 45 75 | 183 35 | | 205 35 | 128 76 | | 217 82 | | | | 491 96 | 1,272 99 |
| Water | | | | | | | | | | | | | |
| Subsistence | 20 85 | 58 55 | 138 10 | 199 65 | 173 60 | 140 05 | 134 70 | 172 80 | 52 51 | | | 7 40 | 1,098 21 |
| Stores Machinery | | 222 89 | 59 37 | 120 12 | | | 87 00 | 31 19 | 2 20 | | | 124 14 | 646 91 |
| General | | 42 05 | | | 1 60 | 3 78 | | | 1 00 | | | 79 54 | 127 97 |
| Repairs Material | 79 00 | 350 00 | 388 96 | 156 25 | 4 43 | 23 03 | 42 45 | | 27 89 | 73 96 | 193 94 | 214 52 | 1,554 43 |
| Wages | 275 07 | 494 16 | 36 81 | 23 16 | 91 49 | 46 02 | 47 01 | 191 85 | 356 55 | 124 51 | 938 44 | 586 86 | 3,211 93 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 16 00 | 6 50 | 4 00 | 2 20 | 2 25 | | 9 82 | 2 00 | 38 30 | 31 84 | | 429 95 | 542 86 |
| Total Expenses | 390 92 | 1,219 90 | 1,127 57 | 888 50 | 916 87 | 689 19 | 672 57 | 991 08 | 765 68 | 230 31 | 1,132 38 | 1,952 54 | 10,977 51 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| *Blanche* | June 3 | June 6 | Vaudreuil. | | | | | | |
| *Blanche* | July 27 | Aug. 31 | Vaudreuil. | | | | | | |
| *Delisle* | Sept. 1 | Sept. 3 | Towing to Pierreville. | | | | | | |
| *Delisle* | Oct. 19 | Oct. 31 | Towing to Papineauville. | | | | | | |
| *Daisy* | Nov. 2 | Nov. 17 | Papineauville. | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Vaudreuil, Que. | 1,491 87 | 752 97 | ..... | 649 58 | ..... | ..... | 382 64 | 75 68 | 919 45 | 1,899 82 | ..... | 321 10 | 6,493 11 |
| Pierreville, Que. | 859 44 | 433 78 | ..... | 374 22 | ..... | ..... | 220 43 | 43 60 | 529 67 | 1,094 48 | ..... | 184 98 | 3,740 60 |
| Papineauville, Que. | 170 90 | 86 24 | ..... | 74 41 | ..... | ..... | 43 84 | 8 69 | 105 31 | 217 63 | ..... | 36 78 | 743 80 |
| Totals | 2,522 21 | 1,272 99 | ..... | 1,098 21 | ..... | ..... | 646 91 | 127 97 | 1,554 43 | 3,211 93 | ..... | 542 86 | 10,977 51 |

| Expenses Working at | Time Working | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Vaudreuil, Que. | June 3 | Aug 28 | Clay, stones | 11,600 | 760 | 598 | $10·858 | 0·5597 |
| Pierreville, Que. | Sept. 5 | Oct. 21 | Sand, clay | 4,686 | 450 | 344½ | 10·858 | 0·7982 |
| Papineauville, Que. | Nov. 2 | Nov. 17 | Caly | 2,184 | 230 | 68½ | 10·858 | 0·3405 |
| Totals | ..... | ..... | ..... | 18,470 | 1,440 | 1,011 | $10·8580 | 0·5943 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Vaudreuil, River Quinchien Que. | 60½ | 29 | 8½ | ..... | ..... | 10 | 12 | ..... | 4 | 6½ | |
| Pierreville Mills, Que. | 15½ | 9 | 5 | ..... | ..... | 10 | ..... | ..... | 50 | 1 | |
| Papineauville, Que. | 19½ | 1½ | 24 | ..... | ..... | ..... | ..... | ..... | 99 | 1 | |
| Totals, hours | 95½ | 39½ | 37½ | ..... | ..... | 20 | 12 | ..... | 153 | 8½ | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Vaudreuil, River Quinchien, Que. | 7 | 12 | ..... | ..... | 12½ | 162 | Overcast at Vaudreuil—10,600. |
| Pierreville Mills, Que. | 5 | 2 | ..... | ..... | 8 | 105½ | Overcast at Pierreville—4,686. |
| Papineauville, Que. | 1 | ..... | ..... | ..... | 15½ | 161½ | Outside service inspection included in above expenditure. |
| Totals, hours. | 13 | 14 | ..... | ..... | 36 | 429 | |

General Remarks: Dredge put into commission at Montreal, Que., on May 30; laid up for season at Ottawa, Ont., on December 12, 1914

DREDGE, P W D. No. 108 ("DÉSCHENES") PROVINCES OF ONTARIO AND QUEBEC.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 1,923 | 5,580 | 4,130 | 5,071 | 2,380 | 586 | | | | | 19,670 |
| Class of material | | | Rock, timber, sand, clay. | Sand, clay, mud. | Boulders, clay, sand stones. | Boulders, stone, gravel, clay, sand | Stones, gravel, clay, boulders. | Boulders, sand, gravel | | | | | |
| Total possible dredging time hrs | | | 110 | 270 | 260 | 260 | 270 | 120 | | | | | 1,290 |
| Total time lost hrs | | | 25 | 62 | 81½ | 49 | 150 | 61 | | | | | 428½ |
| Hours actually dredging | | | 85 | 208 | 178½ | 211 | 120 | 59 | | | | | 861½ |
| C.yds. handled per hour | | | 22½ | 26¾ | 23 | 24 | 20 | 10 | | | | | 22¾ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 174 64 | 471 50 | 472 40 | 491 40 | 407 81 | 479 23 | | | | | 2,496 98 |
| Fuel, Coal and Oil | | 378 61 | | 32 76 | 486 57 | 5 25 | 505 98 | 5 00 | 6 65 | 184 22 | | 22 70 | 1,627 74 |
| Water | | | | | | | | | | | | | |
| Subsistence | 8 00 | 65 25 | 102 15 | 164 75 | 188 00 | 190 00 | 170 00 | 136 65 | 9 25 | 2 50 | | | 1,036 55 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores {Machinery | 36 79 | | 9 00 | 41 47 | 51 86 | 65 65 | 62 55 | 7 50 | 10 07 | | | 114 91 | 399 80 |
| Stores {General | 4 10 | 29 10 | 4 25 | 6 00 | 2 25 | 2 30 | | | 54 00 | | | 12 24 | 114 24 |
| Repairs {Material | 91 50 | 77 00 | 245 75 | | 3 34 | 81 84 | 7 88 | 68 97 | 196 46 | | | 23 07 | 798 81 |
| Repairs {Wages | 418 94 | 342 63 | 391 29 | 59 65 | 127 82 | 49 01 | 165 37 | 67 63 | 92 79 | 90 00 | 90 00 | 106 66 | 2,001 79 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 1 45 | 17 66 | | 27 63 | 2 45 | 5 85 | 2 50 | 7 65 | 53 05 | 8 20 | 2 40 | 186 53 | 314 77 |
| Total Expenses | 560 78 | 909 65 | 927 08 | 803 76 | 1,334 69 | 894 30 | 1,322 09 | 772 63 | 422 27 | 284 92 | 92 40 | 466 11 | 8,790 68 |

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | $ cts. | Name of Tug | Employed. | | Locality. | $ cts. |
| | From | To | | Expense. | | From | To | | Expense. |
| *Aulmer* | June 18 | Aug. 22 | Quyon, Que | | | | | | |
| " | Aug. 26 | Nov. 14 | Fitzroy Har., Ont | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts. |
| Quyon, Que | 1,279 65 | 834 18 | ..... | 531 20 | ..... | ..... | 204 89 | 58 55 | 409 37 | 1,025 87 | ..... | 161 31 | 4,505 02 |
| Fitzroy Harbour, Ont | 1,217 33 | 793 56 | ..... | 505 35 | ..... | ..... | 194 91 | 55 69 | 389 44 | 975 92 | ..... | 153 46 | 4,285 66 |
| Totals | 2,496 98 | 1,627 74 | ..... | 1,036 55 | ..... | ..... | 399 80 | 114 24 | 798 81 | 2,001 79 | ..... | 314 77 | 8,790 68 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| Quyon, Que | June 18 | Aug. 22 | Rock, timber, sand, clay, mud, boulders, clay. | 11,063 | 570 | 441½ | $10·2038 | ·4072 |
| Fitzroy Harbour, Ont | Aug. 26 | Nov. 14 | Boulders, gravel, sand | 8,607 | 720 | 420 | 10·2039 | ·4979 |
| Totals | .... | .... | ..... | 19,670 | 1,290 | 861½ | $10·2039 | ·4469 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Drilling Blasting. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Quyon, Que | 36 | 20½ | 4 | ..... | ..... | 10 | 7 | ..... | ..... | 17½ | |
| Fitzroy Harbour, Ont | 91½ | 5½ | 37½ | 2½ | 30 | 20 | 19 | ..... | 19 | 20½ | |
| Totals, hours | 127½ | 26 | 41½ | 2½ | 30 | 30 | 26 | ..... | 19 | 38 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Quyon, Que | 10 | 1 | ..... | 5 | 17½ | 128½ | Outside service inspection expenses included in above expenditure. |
| Fitzroy Harbour, Ont | 8 | 6 | ..... | 1 | 39½ | 300 | |
| Totals, hours | 18 | 7 | ..... | 6 | 57 | 428½ | |

Dredge put into commission at Aylmer, Que., on June 13, 1914; laid up for season at Quyon, Que., on Nov. 24, 1914.
General Remarks: At Fitzroy Harbour, 6,670 cu. yds. were removed directly into scows and towed out; 1,937 cu. yds. were first cast over and then redredged

## DREDGE, P. W. D. No. 109 ("INDUSTRY"), PROVINCE OF ONTARIO.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 27,223 | 14,655 | 23,002 | 37,690 | 43,335 | 20,958 | | | | | 166,863 |
| Class of material | | | Gravel, silt, quicksand, clay, hard pan. | Sand, clay, driftwood hardpan, boulders, gravel. | Hardpan, gravel, boulders, clay | Clay. | Clay, stones hardpan, Hardpan, rock. | Clay, boulders, rock | | | | | |
| Total possible dredging time ..... hrs | | | 260 | 270 | 260 | 260 | 270 | 150 | | | | | 1,470 |
| Total time lost. ....hrs | | | 123¼ | 100½ | 191 | 126½ | 111 | 51 | | | | | 683¾ |
| Hours actually dredging | | | 136¼ | 169½ | 89 | 133¾ | 159 | 99 | | | | | 786½ |
| C.yds. handled per hour | | | 199 | 86½ | 258 | 282½ | 272½ | 211¼ | | | | | 212½ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 1,237 02 | 1,012 00 | 1,110 07 | 1,082 69 | 1,148 36 | 1,266 17 | 771 72 | | | | 7,628 03 |
| Fuel, coal, and oil | | 151 00 | 322 79 | 975 77 | 692 87 | 576 87 | 516 46 | 722 85 | 628 65 | | | 29 53 | 4,617 79 |
| Water | | | | | | | | | | | | | |
| Subsistence | 37 00 | 44 30 | 399 93 | 490 38 | 417 39 | 409 37 | 372 00 | 410 85 | 162 20 | | | 10 12 | 2,753 54 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores / Machinery | 485 02 | | 6 65 | 208 66 | 974 88 | 65 22 | 529 17 | 163 05 | 56 69 | | | 95 88 | 2,585 22 |
| Stores \ General | 209 23 | 93 95 | 38 60 | 13 52 | 6 14 | 0 44 | | 2 90 | | | | 13 87 | 378 65 |
| Repairs / Material | 245 16 | 2,622 55 | 180 48 | 279 82 | 1,041 43 | 865 13 | 75 08 | | 56 36 | | 42 80 | 3,353 35 | 8,762 16 |
| Repairs \ Wages | 1,011 51 | 941 31 | 29 99 | 256 68 | 166 80 | 215 68 | 140 09 | | 2 79 | 247 54 | 257 62 | 1,141 90 | 4,411 91 |
| Rental of Tugs | | | | | | 282 00 | | | | | | | 282 00 |
| Contingencies | | 18 42 | | 34 99 | | 79 03 | | | 274 09 | | | 321 03 | 727 56 |
| Total expenses | 1,987 92 | 3,871 53 | 2,215 46 | 3,272 82 | 4,409 58 | 3,576 43 | 2,781 16 | 2,565 82 | 1,952 50 | 247 54 | 300 42 | 4,965 68 | 32,146 86 |

### Details of Tug Service—Tugs in attendance and included in these operations.

**Department Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. |
|---|---|---|---|---|
| *Hercules* | June 1 | Nov. 18. | Same as Dredge | |

**Rented Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Owen Sound Tug Line | Aug. 10-11 12 & 13 | | Towing to Bruce Mines | 282 00 |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
| Meaford | 361 82 | 218 64 | | 130 38 | | | 122 41 | 17 94 | 414 87 | 208 89 | | 34 46 | 1,509 41 |
| Owen Sound, Union Cement | 581 61 | 352 17 | | 210 00 | | | 197 16 | 28 88 | 668 23 | 336 47 | | 55 49 | 2,430 01 |
| " MacLaughlin | 314 98 | 190 76 | | 113 75 | | | 106 80 | 15 65 | 361 97 | 182 26 | | 30 06 | 1,316 23 |
| Collingwood | 1,866 28 | 1,129 87 | | 673 72 | | | 632 54 | 92 64 | 2,143 90 | 1,079 49 | | 178 01 | 7,796 45 |
| " Charlton Lumber Co | 48 34 | 29 35 | | 17 52 | | | 16 43 | 2 42 | 55 69 | 28 05 | | 4 63 | 202 43 |
| Bruce Mines | 4,455 00 | 2,697 00 | | 1,608 17 | | | 1,509 88 | 221 12 | 5,117 50 | 2,576 75 | 282 00 | 424 91 | 18,892 33 |
| Totals | 7,628 03 | 4,617 79 | | 2,753 54 | | | 2,585 22 | 378 65 | 8,762 16 | 4,411 91 | 282 00 | 727 56 | 32,146 86 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Meaford | June 1 | June 5 | Gravel, silt | 6,596 | 50 | 37¼ | $40·5210 | ·2288 |
| Owen Sound, Union Cement | " 9 | " 17 | Quicksand, clay | 11,785 | 100 | 60 | 40·5001 | ·2061 |
| " MacLaughlin | " 18 | " 22 | Quicksand, clay | 8,525 | 40 | 32½ | 40·4993 | ·1543 |
| Collingwood | " 27 | July 2 | Hardpan, gravel | | | | | |
| | July 4 | Aug. 6 | Clay, boulders, sand | 16,742 | 380 | 192½ | 40·5010 | ·4656 |
| " Charlton Lumber Co. | " 3 | " 4 | Sand, clay, driftwood, clay, hardpan | 1,111 | 10 | 5 | 40·4860 | ·1822 |
| Bruce Mines | Aug. 20 | Nov. 18 | Rock, stone, boulders, Clay | 122,104 | 890 | 459½ | 41·1149 | ·1547 |
| Totals | | | | 166,863 | 1,470 | 786¾ | $40·8603 | ·1926 |

## Explanation of Unavoidable Loss of Time.

| Time lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Meaford | 1¼ | 4½ | | | | | | | 3¾ | | |
| Owen Sound, Union Cement | 4¼ | 1 | | | | | | | 16 | 5 | |
| " MacLaughlin Wharf | | 3 | 1 | | | | | | 2 | | |
| Collingwood | 71 | 20 | 39 | 3 | | 10 | | | 32 | 4 | |
| " Charlton Lumber Co. | 5 | | | | | | | | | | |
| Bruce Mines | 126 | 32½ | 35 | | | 20 | | | 82½ | 65¼ | |
| Totals, hours | 207¾ | 61 | 75 | 3 | | 30 | | | 136¼ | 74¼ | |

| Time lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Meaford | | | | | 3¼ | 12¾ | Outside service inspection expenses included in expenditure. |
| Owen Sound, Union Cement | 3 | | | | 10½ | 40 | |
| " MacLaughlin Wharf | | 1½ | | | | 7½ | |
| Collingwood | 1½ | | | 1 | 6 | 18 7/8 | |
| " Charlton Lumber Co. | | | | | | 5 | |
| Bruce Mines | 7 | | | | 62 | 430¼ | |
| Totals, hours | 11½ | 1½ | | 1 | 81¾ | 683½ | |

General Remarks: Dredge put into commission at Collingwood, Ont., on May 26; laid up for season at Sault Ste Marie, Ont , on December 10, 1914

DREDGE, P.W.D. No. 110 ("INTERNATIONAL") PROVINCE OF QUEBEC

Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 6,245 | 10,025 | 11,615 | 15,210 | 18,720 | 4,375 | | | | | 66,170 |
| Class of material | | | Sand, mud, boulders, hardpan, rock. | Hardpan... boulders. | Hardpan.... boulders. | Hardpan.... boulders. | Hardpan... boulders | | | | | | |
| Total possible dredging time...hrs | | | 260 | 270 | 260 | 260 | 270 | 106 | | | | | 1,516 |
| Total time lost ...hrs | | | 156 | 149½ | 167 | 139 | 106½ | 136 | | | | | 854 |
| Hours actually dredging | | | 104 | 120½ | 93 | 121 | 163½ | 60 | | | | | 662 |
| C.yds. handled per hour | | | 60 | 83¼ | 125¼ | 125½ | 114½ | | | | | | 144 |

Details of Expenditure by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts. |
| Wages | 38 33 | | 779 24 | 624 65 | 670 13 | 593 97 | 770 01 | 694 25 | 171 85 | | | 172 62 | 4,515 05 |
| Fuel, Coal and Oil | 11 87 | 284 04 | 271 36 | 93 11 | 1,314 63 | 579 39 | 623 77 | 579 39 | 90 72 | | | 44 52 | 3,892 80 |
| Water | | | | | | | | | | | | | |
| Subsistence | 10 45 | 87 55 | 239 00 | 339 77 | 294 50 | 311 70 | 324 15 | 269 70 | 42 73 | | | 34 14 | 1,953 69 |
| Wharfage | 434 00 | | | | | | | | | | | | 434 00 |
| Pilotage | | 30 00 | | | | | | 28 60 | | | | | 58 60 |
| Stores Machinery | 107 16 | 338 41 | 10 48 | 242 22 | 24 49 | 445 89 | 96 10 | 564 37 | | | 2 00 | 153 22 | 1,924 34 |
| Stores General | 24 60 | 56 15 | | | | 19 76 | | 4 22 | 6 10 | 0 30 | | 22 60 | 133 73 |
| Repairs Material | 212 50 | 3,493 04 | 1,108 41 | 2,013 77 | 1,055 22 | 3,104 27 | 964 65 | 228 53 | 2,902 69 | 514 41 | | 597 35 | 16,194 84 |
| Repairs Wages | 649 82 | 808 87 | 79 01 | 310 78 | 234 87 | 291 03 | 489 36 | 325 61 | 677 19 | 130 65 | 155 35 | 269 81 | 4,472 35 |
| Rental of tugs | | 5 00 | | | 30 00 | | | 730 00 | | 60 00 | | | 825 00 |
| Contingencies | 72 95 | | 29 01 | 3 17 | 2 10 | 3 57 | | 72 65 | 69 60 | 13 60 | | 446 57 | 713 82 |
| Total Expenses | 1,561 68 | 5,103 06 | 2,517 11 | 3,627 47 | 3,625 94 | 5,349 58 | 3,268 04 | 3,437 32 | 3,960 88 | 768 96 | 157 35 | 1,740 83 | 35,118 22 |

Details of Tug Service—Tugs in attendance, and included in these operations.

Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts |
| *Storm King* | June 1 | June 13 | Quebec | |
| *Archie Stewart* | " 15 | Nov. 20 | Longueuil | |

Rented Tugs

| Name of Tug | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Mekinac* | Sept. 11 | | Longueuil | 5 00 |
| Str. *Queen* | June 9 | June 10 | Quebec to Montreal | 700 00 |
| Sincennes-McNaughton Line | Aug. 17 | | Longueuil to Cantin's Dock | 30 00 |
| Strs. *Spray* and *Belle* | June 4 | June 8 | Quebec | 60 00 |
| Sincennes-McNaughton Line | Nov. 27 | | Montreal Hbr. to Dry Dock | 30 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
| Quebec—Allan's Whf | 187 56 | 161 72 | ..... | 81 17 | 18 04 | 2 44 | 79 95 | 5 55 | 672 78 | 185 79 | 34 28 | 29 66 | 1,458 91 |
| Longueuil—Gov. Wharf | 978 72 | 843 83 | ..... | 423 50 | 94 08 | 12 70 | 417 13 | 28 99 | 3,510 51 | 969 46 | 178 83 | 154 73 | 7,612 48 |
| Longueuil R. & O. Whf | 3,191 90 | 2,751 99 | ..... | 1,381 13 | 306 79 | 41 42 | 1,360 39 | 94 54 | 11,448 92 | 3,161 72 | 583 22 | 504 61 | 24,826 63 |
| Lake St. Peter—Assisting Str. *Zeeland* | 156 87 | 135 26 | ..... | 67 89 | 15 09 | 2 04 | 66 87 | 4 65 | 562 66 | 155 38 | 28 67 | 24 82 | 1,220 20 |
| Totals | 4,515 05 | 3,892 80 | ..... | 1,953 69 | 434 00 | 58 60 | 1,924 34 | 133 73 | 16,194 84 | 4,472 35 | 825 00 | 713 82 | 35,118 22 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Quebec—Allan's Whf | June 1 | June 5 | Sand, mud, boulders | 1,070 | 60 | 27½ | $53·0512 | $1·3634 |
| | June 16 | July 2 | | | | | | |
| Longueuil—Gov. Wharf | Oct. 28 | Nov. 9 | Hardpan, rock, boulders | 12,045 | 375 | 143½ | 53·0486 | ·6320 |
| Longueuil R. & O. Whf | July 3 | Oct. 27 | Hardpan, boulders | 53,055 | 1,000 | 468 | 53·0483 | ·4679 |
| Lake St. Peter—Assisting Str. *Zeeland* | Nov. 14 | Nov. 20 | Assisting Str. *Zeeland* | | 81 | 23 | 53·0521 | |
| Totals | | | | 66,170 | 1,516 | 662 | $53·0486 | ·5307 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs | Orders. | | Fuel. | Water |
| Quebec—Allan's Whf | 11 | 6 | ..... | ..... | 4 | ..... | 7 | ..... | ..... | ..... | |
| Longueuil—Gov. Wharf | 99 | 13 | 3½ | ..... | ..... | 10 | 16 | 5 | 60 | 7½ | |
| Longueuil R. & O. Whf | 349 | 14½ | 25 | ..... | ..... | 20 | 81 | ..... | ..... | 18½ | |
| Lake St. Peter—Assisting Str. *Zeeland* | 4 | ..... | ..... | ..... | ..... | ..... | 16 | ..... | 38 | ..... | |
| Totals, hours | 463 | 33½ | 28½ | ..... | 4 | 30 | 120 | 5 | 98 | 26 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Quebec—Allan's Whf | ..... | ..... | ..... | ..... | 4½ | 32½ | Outside service inspection included in expenditure |
| Longueuil—Gov. Wharf | ..... | 10 | ..... | ..... | 7½ | 231½ | |
| Longueuil R. & O. Whf | ..... | 10 | ..... | ..... | 14 | 532 | |
| Lake St. Peter—Assisting Str. *Zeeland* | ..... | ..... | ..... | ..... | ..... | 58 | |
| Totals, hours | ..... | 20 | ..... | ..... | 26 | 854 | |

General Remarks: Dredge put into commission at Montreal, Que., on May 18; laid up for season at Montreal, Que., on Dec. 5, 1914.

## DREDGE, P.W.D. No. 111 ("LAC ST. JEAN") PROVINCE OF QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 160 | 1,652 | 3,500 | 3,830 | 90 | | | | | 9,322 |
| Class of material | | | | Sand. | Sand, clay | Sand, clay, slabs, stones | Clay, slabs, stones | Clay | | | | | |
| Total possible dredging time hrs | | | | 30 | 260 | 260 | 270 | 30 | | | | | 850 |
| Total time lost hrs | | | | 10 | 151 | 146 | 133½ | 26 | | | | | 466½ |
| Hours actually dredging | | | | 20 | 109 | 114 | 136½ | 4 | | | | | 383½ |
| C.yds. handled per hour | | | | 8 | 15‡ | 21½ | 28 | 22½ | | | | | 24½ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | 42 30 | 508 00 | 462 00 | 442 96 | 155 40 | 77 83 | | | | 1,688 49 |
| Fuel, Coal and Oil | | 495 90 | | | 674 28 | 180 20 | 871 15 | | | | | | 2,221 53 |
| Water | | | | | | | | | | | | | |
| Subsistence | | | | 30 40 | 171 25 | 165 00 | 171 85 | 48 50 | | | | | 587 00 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | | | | 38 95 | 27 07 | | 129 08 | | 13 35 | | 3 50 | | 211 95 |
| Stores General | | | | | | | 59 75 | | | | | | 59 75 |
| Repairs Material | | 152 92 | 61 00 | 6 09 | 149 40 | 7 90 | 63 25 | | 37 05 | | | | 477 61 |
| Repairs Wages | 50 00 | 255 79 | 227 50 | 644 45 | 12 00 | 58 00 | 77 04 | 38 84 | 115 25 | 95 00 | 95 00 | 95 00 | 1,763 87 |
| Rental of tugs | | | | | 67 50 | | 82 50 | | | | | | 150 00 |
| Contingencies | | | 12 80 | | 4 25 | 7 32 | | | 14 60 | | | | 38 97 |
| Total Expenses | 50 00 | 904 61 | 301 30 | 762 19 | 1,613 75 | 880 42 | 1,897 58 | 242 74 | 258 08 | 95 00 | 98 50 | 95 00 | 7,199 17 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| *Marie Louise* | All season | | $ cts | *Alexandre Morin* | June 25 | | St. Jerome | $ cts 43 50 |
| | | | | Tug —— | July 27 | | St. Jerome | 39 00 |
| | | | | Tug *Le Nord* | July 11 | | St. Jerome | 67 50 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts |
| St. Jerome, Que | 541 54 | 712 53 | .... .... | 188 27 | .... .... | ..... | 67 98 | 19 16 | 153 19 | 565 73 | 150 00 | 12 50 | 2,410 90 |
| Roberval, Que | 1,146 95 | 1,509 00 | ..... | 398 73 | .... .... | ..... | 143 97 | 40 59 | 324 42 | 1,198 14 | .... | 26 47 | 4,788 27 |
| Totals | 1,688 49 | 2,221 53 | ..... .. | 587 00 | ..... | ..... | 211 95 | 59 75 | 477 61 | 1,763 87 | 150 00 | 38 97 | 7,199 17 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| St. Jerome, Que | July 29 | Aug. 23 | Sand — | 1,602 | 220 | 123 | $19·6008 | $1·504 |
| Roberval, Que | Aug. 28 | Nov. 4 | Sand, clay, slubs, stones | 7,720 | 630 | 260¼ | 18·3810 | ·620 |
| Totals | .. | ..... | ..... | 9,320 | 850 | 383¼ | 18·7722 | ·772 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| St. Jerome, Que | 16 | . | 50 | ..... | .... .... | | 10 | .... | .... | 10 | |
| Roberval, Que | 74 | . | 161½ | ..... | .... . | 20 | | . | 29 | 21 | |
| Totals, hours | 90 | ..... | 211½ | ..... | ..... | 20 | 10 | | 29 | 31 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| St. Jerome, Que | .. .. | 10 | ..... | .... | 1 | 97 | |
| Roberval, Que | 3 | .... | ..... | .... | 61 | 369½ | |
| Totals, hours | 3 | 10 | ..... | .. | 62 | 466½ | |

General Remarks: Dredge put into commission at Roberval, Que., on July 24th; laid up for Season at Roberval, Que., on November 18th, 1914.

## DREDGE, P.W.D. STEAM DERRICK, PROVINCE OF QUEBEC

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 370 | 3,805 | 237 | 600 | 1,465 | 200 | | | | | 6,677 |
| Class of material | | | Stones, slabs | Stones, slabs | Rock | Sand | Sand | Sand | | | | | |
| Total possible dredging time hrs | | | 20 | 220 | 190 | 260 | 270 | 40 | | | | | 1,000 |
| Total time lost hrs | | | 12 | 96 | 130 | 220 | 178 | 22 | | | | | 658 |
| Hours actually dredging | | | 8 | 124 | 60 | 40 | 92 | 18 | | | | | 342 |
| C.yds. handled per hour | | | 46·33 | 30·68 | 3·95 | 15·00 | 15·91 | 11·11 | | | | | 19·52 |

### Details of Expenditures by Months.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | 260 00 | 520 00 | 304 00 | | 251 83 | | | | 1,335 83 |
| Fuel, Coal and Oil | | | | | | | 58 50 | | | | | | 58 50 |
| Water | | | | | | 41 00 | | | | | | | 41 00 |
| Subsistence | | | | | 90 00 | 197 28 | 90 00 | | 109 33 | 1 25 | | | 487 86 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores/Machinery | | | | | | | | | | | | | |
| General | | | | | 15 08 | | 17 93 | | 3 87 | | | | 36 88 |
| Repairs/Material | | | | | | 20 50 | | | | | | | 20 50 |
| \Wages | | | | | | | | | | 49 38 | | 15 05 | 64 43 |
| Rental of Tugs | | | | | | | | | | | | | |
| Contingencies | | | | | | 50 00 | | | 20 00 | | | | 70 00 |
| | | | | | | 3 00 | | | | | | | 3 00 |
| Total Expenses | | | | | 365 08 | 831 78 | 470 43 | | 385 03 | 50 63 | | 15 05 | 2,118 00 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts | | From | To | | $ cts. |
| | | | | | *Ha Ha* | Sept. 9. | Sept. 10. | St. Alphonse and Chicoutimi to Ha' Ha' Bay | 50 00 |
| | | | | | *Marie Louise* | Nov. 7 | | Ha' Ha' Bay to Chicoutimi | 20 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts |
| Grande Bergeronne | 343 94 | ..... | 41 00 | 126 86 | ..... | ... | 16 37 | ..... | 21 47 | ..... | 6 67 | 3 00 | 559 31 |
| Sault au Mouton | 260 00 | ..... | ... | 90 42 | ..... | ... | ..... | ..... | 21 48 | ..... | ..... | ..... | 371 90 |
| Grand Baie | 731 89 | 58 50 | ... | 270 58 | ..... | ... | 20 51 | 20 50 | 21 48 | ..... | 63 33 | ..... | 1,186 79 |
| or St. Alexis Ha Ha Bay | | | | | | | | | | | | | |
| Totals | 1,335 83 | 58 50 | 41 00 | 487 86 | ..... | ..... | 36 88 | 20 50 | 64 43 | ..... | 70 00 | 3 00 | 2,118 00 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Grande Bergeronne | June 29 | July 25 | Stones and slabs | 4,175 | 240 | 132 | $4·237 | ·133 |
| Sault au Mouton | Aug. 10 | Aug 29 | Boulders | 237 | 180 | 60 | 6·198 | ·619 |
| Grande Baie | Aug. 31 | Nov. 5 | Sand | 2,265 | 580 | 150 | 7·911 | ·523 |
| or St. Alexis Ha Ha Bay. | | | | | | | | |
| Totals | ..... | ..... | ..... | 6,677 | 1,000 | 342 | 6·192 | ·317 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Grande Bergeronne | ..... | ..... | ..... | ..... | 108 | ..... | ..... | ..... | ..... | ..... | ..... |
| Sault au Mouton | ..... | ..... | ..... | ..... | 60 | ..... | 30 | ..... | 30 | ..... | ..... |
| Grand Baie | ..... | ..... | ..... | ..... | 350 | ..... | 50 | ..... | 30 | ..... | ..... |
| Totals, hours | ..... | ..... | ..... | ..... | 518 | ..... | 80 | ..... | 60 | ..... | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Grande Bergeronne | ..... | ..... | ..... | ..... | ..... | 108 | |
| Sault au Mouton | ..... | ..... | ..... | ..... | ..... | 120 | |
| Grande Baie | ..... | ..... | ..... | ..... | ..... | 430 | |
| Totals, hours | ..... | ..... | ..... | ..... | ..... | 658 | |

General Remarks: Dredge put into commission at Chicoutimi, Que., on May 9, 1914; laid up for season at Chicoutimi, Que., on Nov. 30, 1914.
Driving piles at Chicoutimi Wharf, May 10th to June 4th
Driving piles at Grand Bergeronne, June 5th to June 27th
Driving piles at Port Neuf, July 27th to Aug. 8th
} Expenditure for pile driving not included in above.

DREDGE, P W D. No. 101 ("STONELIFTER") PROVINCE OF QUEBEC.

Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | 30 | 100 | 18 | | | | | | 148 |
| Class of material | | | | | Boulders. | Boulders. | Boulders. | | | | | | |
| Total possible dredging time hrs | | | | | 150 | 260 | 70 | | | | | | 480 |
| Total time lost hrs | | | | | 42 | 107 | 29 | | | | | | 178 |
| Hours actually dredging | | | | | 108 | 153 | 41 | | | | | | 302 |
| C.yds. handled per hour | | | | | 277 | 653 | 439 | | | | | | 490 |

Details of Expenditures by Months.

| Items of Expense. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | | 502 71 | 570 81 | 275 83 | 306 50 | | | | 1,745 85 |
| Fuel, Coal and Oil | | | | | | | | | | | | | |
| Water | | | | | | | | | | | | | |
| Subsistence | | | | | | 223 45 | 266 10 | 105 00 | 2 00 | | | | 596 55 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | | | | | | 8 35 | 2 25 | | 5 05 | | | | 15 65 |
| Stores General | | | | | | 54 18 | 18 10 | | | | | | 72 28 |
| Repairs Material | | | | | | 82 56 | | | | | | | 82 56 |
| Repairs Wages | | 50 00 | 50 00 | 50 00 | | 2 29 | 52 19 | 75 81 | | 100 00 | 50 00 | 50 00 | 480 29 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | | | | | | 5 04 | | | | | | 5 04 |
| Total Expenses | | 50 00 | 50 00 | 50 00 | | 963 54 | 914 49 | 456 64 | 313 55 | 100 00 | 50 00 | 50 00 | 2,998 22 |

Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts. | | From | To | | cts. |
| *Annette* | | | | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts |
| St. Maurice River, Rapid Manigance | 1,745 85 | | | 596 55 | | | 15 65 | 72 28 | 82 56 | 480 29 | | 5 04 | 2,998 22 |
| Totals | 1,745 85 | | | 596 55 | | | 15 65 | 72 28 | 82 56 | 480 29 | | 5 04 | 2,998 22 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| St. Maurice River, Rapid Manigance | Aug. 14 | Oct. 8 | Boulders | 148 | 480 | 302 | $9·9278 | $20·2582 |
| Totals | | | | 148 | 480 | 302 | $9·9278 | $20·2582 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Navigation. | Pumping. | Holidays. | Unloading Boulders. | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Fuel. | Water. |
| St. Maurice River, Rapid Manigance | 1 | 11½ | 17 | 26½ | 9½ | 70 | 29½ | | | |
| Totals, hours | 1 | 11½ | 17 | 26½ | 9½ | 70 | 29½ | | | |

| Time Lost at | Cleaning. | | Aground Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| St. Maurice River, Rapid Manigance | 1 | | 6 | 6 | | 178 | |
| Totals, hours | 1 | | 6 | 6 | | 178 | |

Dredge put into commission at Grand Piles, Que., on Aug. 6; laid up for season at Pte. Madeleine, on Oct. 16.

General Remarks: The cost per cubic yard appears high but it must be taken into consideration that this includes locating, drilling, blasting, and removal of boulders. It must also be taken into consideration that the operation of this plant cannot be compared to regular dredge and plant in attendance.

## DREDGE, P. W. D. No. 112 ("MATTAWA") PROVINCE OF ONTARIO

### Details of Material and Time by Months

| Items. | April. | May. | June. | July. | August. | September. | October. | November | January. | February. | December | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 5,000 | 17,160 | 16,990 | 15,370 | 7,240 | | | | | 61,760 |
| Class of material | | | | Sand | Sand | Sand, clay. | Sand, clay. | Sand, pulp, logs. | | | | | |
| Total possible dredging time hrs | | | | 100 | 260 | 260 | 270 | 140 | | | | | 1,030 |
| Total time lost. hrs | | | | 20½ | 65 | 82 | 65 | 46 | | | | | 278½ |
| Hours actually dredging | | | | 79½ | 195 | 178 | 205 | 94 | | | | | 751½ |
| C.yds. handled per hour | | | | | | | | 77 | | | | | |

### Details of Expenditure by Months.

| Items of Expense. | | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | 464 35 | 482 88 | 534 52 | 513 62 | 384 05 | | | | | 2,378 82 |
| Fuel, coal, and oil | | 319 94 | 15 93 | | | 354 27 | 660 20 | 184 17 | | | | 317 08 | 1,851 59 |
| Water | | | | | | | | | | | | | |
| Subsistence | 34 00 | 10 60 | 15 15 | 138 00 | 188 75 | 182 94 | 211 50 | 150 72 | | | | | 932 01 |
| Wharfage | | | | 0 40 | | 2 20 | | | | | | | 2 60 |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 242 13 | 246 60 | 37 03 | | 13 13 | 262 38 | 39 87 | 106 80 | | 7 94 | | 153 42 | 1,109 30 |
| (General. | 65 45 | 27 05 | | | | 2 10 | 6 65 | | | | | 12 22 | 113 47 |
| Repairs (Material | 162 31 | 586 81 | 106 00 | 158 67 | | 87 55 | 73 30 | 50 78 | 12 93 | 57 90 | | 124 81 | 1,421 06 |
| (Wages | 372 72 | 437 85 | 401 65 | 7 44 | 94 40 | 75 07 | 91 03 | 92 35 | 155 88 | 57 94 | 19 09 | 190 51 | 1,995 93 |
| Rental of tugs | | 3 00 | | | | | 20 00 | 180 00 | | | | | 203 00 |
| Contingencies | 41 10 | 7 30 | | 7 70 | 12 40 | 23 80 | 9 00 | 21 25 | 7 60 | | | 21 05 | 199 99 | 351 19 |
| Total expenses | 917 71 | 1,639 15 | 576 11 | 776 56 | 791 56 | 1,524 83 | 1,624 57 | 1,170 12 | 176 41 | 123 78 | 40 14 | 998 03 | 10,358 97 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Maggie K.* | All season | | | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| E. Clark tug | May 1 | | Towing coal scow | 3 00 |
| Tug "Albino" | Oct. 3 | Nov. 20. | Towing to Sturgeon Falls | 20 00 |
| " " | Nov. 3 | Nov. 20. | Sturgeon Falls | 180 00 |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| North Bay | 1,122 14 | 873 43 | ..... | 439 64 | 2 60 | ..... | 523 28 | 53 51 | 670 34 | 941 52 | 3 00 | 165 66 | 4,795 12 |
| Sturgeon River | 392 52 | 305 53 | ..... | 153 80 | ..... | ..... | 183 04 | 18 74 | 234 49 | 329 34 | ..... | 57 95 | 1,675 41 |
| Sturgeon Falls, log channel | 864 16 | 672 63 | ..... | 338 57 | ..... | ..... | 402 98 | 41 22 | 516 23 | 725 07 | 200 00 | 127 58 | 3,888 44 |
| Totals | 2,378 82 | 1,851 59 | ..... | 932 01 | 2 60 | ..... | 1,109 30 | 113 47 | 1,421 06 | 1,995 93 | 203 00 | 351 19 | 10,358 97 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| North Bay | July 21 | Sept. 14 | Sand | 29,370 | 500 | 354½ | $13·5264 | ·1632 |
| Sturgeon River | Sept. 18 | Oct. 3 | Sand, clay | 12,480 | 150 | 124 | 13·5113 | ·1342 |
| Sturgeon Falls, log channel | Oct. 9 | Nov. 17 | Sand, clay, pulp | 19,910 | 380 | 273 | 14·2433 | ·1953 |
| Totals | | | | 61,760 | 1,030 | 751½ | 13·7843 | ·1677 |

## Explanation of Unavoidable Loss of Time.

| Time lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| North Bay | 35 | 1 | 52½ | ..... | ..... | 10 | ..... | ..... | 5 | 7 | ..... |
| Sturgeon River | 2 | 1 | 4 | ..... | ..... | ..... | 1 | ..... | 10 | 2 | ..... |
| Sturgeon Falls, log channel | 48 | 20 | 10 | ..... | ..... | 10 | 1 | ..... | ..... | 2 | ..... |
| Totals, hours | 85 | 22 | 66½ | ..... | ..... | 20 | 2 | ..... | 15 | 11 | ..... |

| Time lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| North Bay | 2 | 10 | ..... | ..... | 23 | 145½ | Outside service inspection expenses included in expenditure. |
| Sturgeon River | 2 | ..... | ..... | ..... | 4 | 26 | |
| Sturgeon Falls, log channel | 1 | ..... | ..... | ..... | 15 | 107 | |
| Totals, hours | 5 | 10 | ..... | ..... | 42 | 278½ | |

General Remarks: Dredge put into commission at Sturgeon Falls, Ont., on May 30; laid up for season at Sturgeon Falls, Ont., on November 26, 1914.

## DREDGE, P.W.D. No 113 ("NIPISSING") AND STONE-LIFTER No. 102, PROVINCES OF ONTARIO AND QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 2,982 | 4,492 | 4,754 | 8,706 | 9,459 | 3,645 | | | | | 34,038 |
| Class of material | | | Boulders, clay, hard-pan. | Hardpan, boulders, clay, gravel. | Gravel, boulders, hardpan, Sd. siltings. | Clay, silt-ings, slabs, sawdust. | Clay, slabs, sawdust. | Sawdust, slabs, old wrecks. | | | | | |
| Total possible dredging time.....hrs | | | 260 | 270 | 260 | 260 | 270 | 170 | | | | | 1,490 |
| Total time lost.....hrs | | | 202½ | 103½ | 104 | 126 | 108 | 54 | | | | | 698 |
| Hours actually dredging | | | 57½ | 166½ | 156 | 134 | 162 | 116 | | | | | 792 |
| Cuyds. handled per hour | | | 52 | 26½ | 30 | 65 | 58½ | 31½ | | | | | 42¾ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 27 09 | 378 35 | 637 96 | 685 31 | 709 01 | 544 18 | 553 61 | 256 84 | 22 26 | 57 50 | 433 23 | 4,305 34 |
| Fuel, Coal and Oil | | 27 50 | 43 43 | 418 89 | 594 00 | 157 50 | 2 50 | | | | | 495 75 | 1,739 57 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 23 00 | 234 76 | 99 00 | 215 65 | 375 79 | 318 70 | 175 50 | 8 00 | | 12 30 | 207 25 | 1,669 95 |
| Stonelifter No. 102 | | | | | | | | | | | | 783 29 | 783 29 |
| Stores (Machinery | 8 78 | 148 86 | 113 91 | 55 40 | 72 78 | 7 20 | 10 03 | 11 30 | 5 25 | | | 97 14 | 530 65 |
| Stores (General | 36 32 | 42 03 | 0 85 | 2 00 | | 6 12 | | 29 45 | | | | 78 26 | 195 03 |
| Repairs (Material | 299 82 | 546 95 | 475 57 | 145 90 | 8 61 | 5 40 | | | 168 66 | 27 42 | | 579 33 | 2,257 66 |
| Repairs (Wages | 851 91 | 687 91 | 831 97 | 105 31 | 199 56 | 82 70 | 310 84 | 63 98 | 305 28 | 536 71 | 594 81 | 1,545 03 | 6,116 01 |
| Rental of tugs | | | | | 70 00 | 115 00 | 215 00 | | | | | | 400 00 |
| Contingencies | | 19 00 | | 41 45 | 3 15 | 16 45 | | | 3 50 | 17 95 | | 511 85 | 613 35 |
| Total Expenses | 1,196 83 | 1,522 34 | 2,078 84 | 1,505 91 | 1,849 06 | 1,475 17 | 1,401 25 | 833 84 | 747 53 | 604 34 | 664 61 | 4,731 13 | 18,610 85 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Cliffside* | June 1.. | June 12.. | Grenville | |
| " | June 30.. | Aug. 15.. | St. Andrews | |
| *Blanche* | Sept. 17.. | Oct. 20.. | Rockland | |
| " | Oct. 24.. | Nov. 20.. | Ottawa | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Glide* | Aug. 5.. | Aug. 8.. | St. Andrews | 70 00 |
| *Caroline* | " 19.. | Sept. 1.. | " | 115 00 |
| | Sept. 14.. | Oct. 8. | " | 215 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Stone-lifter. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
| Grenville, Que | 285 40 | 115 33 | ..... | 110 72 | ..... | ..... | 35 18 | 12 94 | 199 67 | 405 42 | ..... | 40 66 | 1,155 32 |
| St. Andrews, Que | 2,155 38 | 870 86 | ..... | 836 00 | 693 53 | ..... | 265 66 | 97 63 | 1,130 24 | 3,061 86 | 400 00 | 307 06 | 9,818 22 |
| Rockland, Ont | 1,021 97 | 412 93 | ..... | 396 40 | 89 76 | ..... | 125 96 | 46 29 | 535 91 | 1,451 78 | ..... | 145 59 | 4,226 59 |
| Ottawa, Ont | 842 59 | 340 45 | ..... | 326 83 | ..... | ..... | 103 85 | 38 17 | 441 84 | 1,196 95 | ..... | 120 04 | 3,410 72 |
| Totals | 4,305 34 | 1,739 57 | ..... | 1,669 95 | 783 29 | ..... | 530 65 | 195 03 | 2,257 66 | 6,116 01 | 400 00 | 613 35 | 18,610 85 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Grenville, Que | June 1 | June 12 | Clay, boulders, | 2,922 | 120 | 52½ | $22·0060 | ·3953 |
| St. Andrews, Que | " 30 | Sept. 12 | Hardpan, boulders, gravel, sd. siltings, sawdust, clay. | 14,926 | 780 | 396½ | 24·7622 | ·6577 |
| Rockland, Ont | Sept. 17 | Oct. 20 | Slabs, clay, old wrecks | 10,925 | 320 | 188 | 22·4818 | ·3868 |
| Ottawa, Ont | Oct. 24 | Nov. 20 | Slabs, sawdust | 5,265 | 270 | 155 | 22·0046 | ·6478 |
| Totals | | | | 34,038 | 1,490 | 792 | $23·4985 | ·5467 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel | Water |
| Grenville, Que.—Gov. Wharf | 5 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 13 | 4½ | |
| St. Andrews, Que.—Channel | 116 | 33 | ..... | ..... | ..... | 20 | 58 | ..... | 45 | 12 | |
| Rockland, Ont.—Edwards Mill | 8 | 10 | ..... | ..... | ..... | 10 | 64 | ..... | 30 | 4 | |
| Ottawa, Ont.—Inter Bridge and Foot of Rideau Locks | 9 | 5 | ..... | ..... | ..... | ..... | 53 | 5 | 32 | 5 | |
| Totals, hours | 138 | 49 | ..... | ..... | ..... | 30 | 175 | 5 | 120 | 25½ | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Grenville, Que.—Gov. Wharf | ..... | ..... | ..... | ..... | 44 | 67½ | |
| St. Andrews, Que.—Channel | ..... | 5 | ..... | ..... | 94½ | 383½ | Dredge under repairs. 2 weeks. Leaking |
| Rockland, Ont.—Edwards Mill | 1 | ..... | ..... | ..... | 5 | 132 | Outside service inspection expenses |
| Ottawa, Ont.—Inter. Bridge and Foot of Rideau Locks | 1 | ..... | ..... | ..... | 5 | 115 | included in expenditure. |
| Totals, hours | 2 | 5 | ..... | ..... | 148½ | 698 | |

General Remarks: The work at St Andrews was performed by P W D. No. 113 and stonelifter No. 102; June 30 to Sept 12; the dredge then proceeding to Rockland and the stonelifter remaining at St Andrews until Oct 8, removing boulders. On completing work at St. Andrews, proceeded to Rockland to assist in work of P W D. No 113 by flushing out dump scow loads of mill refuse. The figures appearing in the tabulated statement above are the totals for the Dredge P W D No. 113 and Stonelifter No 102

Dredge put into Commission at Ottawa, Ont , on May 22, 1914; laid up for season at Ottawa, Ont , on Dec 5.

DREDGE, P.W.D. No. 114 ("ONTARIO") PROVINCE OF ONTARIO.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 280 | 10,503 | 12,422 | 16,897 | 8,628 | 15,713 | 8,110 | | | | | 72,553 |
| Class of material | | Quick sand | Quick sand | Quick sand | Quick sand | Sand, clay, gravel, quick sand | Sand, gravel clay. | Sand, clay | | | | | |
| Total possible dredging time hrs | | 20 | 380½ | 393 | 409 | 297 | 270 | 210 | | | | | 1,985½ |
| Total time lost hrs | | 12 | 145½ | 154½ | 78 | 170 | 72 | 92½ | | | | | 724½ |
| Hours actually dredging | | 8 | 241 | 238½ | 331 | 126½ | 198 | 117½ | | | | | 1,260½ |
| C yds. handled per hour | | 45 | 43½ | 52 | 51 | 68¼ | 79⅓ | 69 | | | | | 57½ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 60 75 | 482 86 | 646 47 | 852 37 | 506 62 | 562 68 | 596 51 | 277 37 | | | | 3,985 63 |
| Fuel, Coal and Oil | 91 00 | 38 50 | 74 75 | 2 50 | 169 00 | | 678 50 | 139 75 | 35 75 | | | 22 70 | 1,252 45 |
| Water | | | | | | | | | | | | | |
| Subsistence | 23 30 | 180 53 | 213 10 | 220 50 | 204 50 | 192 50 | 176 50 | 169 60 | 67 23 | | | | 1,447 76 |
| Wharfage | | 60 00 | | | | | | | | | | | 60 00 |
| Stores { Machinery | 285 20 | 150 58 | 56 03 | 63 94 | 437 16 | 11 90 | 137 90 | 138 63 | 22 02 | 1 88 | | 267 36 | 1,572 60 |
| Stores { General | 8 50 | 98 86 | 5 50 | | | | | | 2 85 | | | 15 24 | 130 95 |
| Repairs { Material | 164 26 | 198 34 | 147 02 | 913 44 | 24 71 | 107 76 | 725 79 | 58 03 | 72 46 | 1 00 | | 742 16 | 3,154 97 |
| Repairs { Wages | 775 00 | 566 75 | 434 88 | 372 56 | 115 40 | 331 39 | 69 48 | 19 05 | 25 81 | 100 00 | 107 34 | 543 71 | 3,461 97 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 28 02 | | 13 08 | 30 90 | 6 10 | 29 03 | 25 06 | 2 22 | 72 44 | | | 713 79 | 920 64 |
| Total Expenses | 1,375 88 | 1,354 31 | 1,427 22 | 2,250 31 | 1,809 24 | 1,179 20 | 2,375 91 | 1,123 79 | 575 93 | 102 88 | 107 34 | 2,304 96 | 15,986 97 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expenses. | Name of Tug. | Employed. From | To | Locality. | Expenses. |
| | | | $ cts. | | | | | $ cts. |
| Tug *St. Paul* | All season | | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Point Edward | 2,681 30 | 842 58 | ..... | 973 95 | 40 36 | ..... | 1,057 96 | 88 06 | 2,122 48 | 2,329 03 | ..... | 619 32 | 10,755 04 |
| Sarnia Oil Refinery | 194 48 | 61 11 | ..... | 70 66 | 2 93 | ..... | 76 73 | 6 42 | 153 95 | 168 91 | ..... | 44 94 | 780 13 |
| Sarnia Bay | 1,109 85 | 348 76 | ..... | 403 15 | 16 71 | ..... | 437 91 | 36 47 | 878 54 | 964 03 | ..... | 256 38 | 4,451 80 |
| Totals | 3,985 63 | 1,252 45 | ..... | 1,447 76 | 60 00 | ..... | 1,572 60 | 130 95 | 3,154 97 | 3,461 97 | ..... | 920 64 | 15,986 97 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Point Edward | May 29 | Sept. 2 | Quick sand | 41,317 | 1,276½ | 848 | $12·6828 | ·2603 |
| Sarnia Oil Refinery | Sept. 8 | Sept. 14 | Clay | 4,384 | 89 | 61½ | $12·6850 | ·1779 |
| Sarnia Bay | Sept. 22 | Nov. 25 | Clay, sand, gravel | 26,852 | 620 | 351 | 12·6831 | ·1657 |
| Totals | ..... | ..... | ..... | 72,553 | 1,985½ | 1,260½ | $12·6830 | ·2203 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Point Edwnrd | 28½ | 5 | 12½ | ..... | ..... | 10 | 1½ | ..... | 11 | 18 | ..... |
| Sarnia Oil Refinery | 8½ | 1½ | ..... | ..... | ..... | 10 | ..... | ..... | ¼ | ..... | ..... |
| Sarnia Bay | 59½ | 5½ | 71½ | 3 | ..... | 10 | ½ | 23 | 29 | 14½ | ..... |
| Totals, hours | 350½ | 12¼ | 84 | 3 | ..... | 30 | 2 | 23 | 44 | 32½ | ..... |

| Time Lost at | Cleaning | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Point Edward | 16 | 12 | ..... | ..... | 60 | 428½ | Outside service inspection included in above expenditure. |
| Sarnia Oil Refinery | ..... | ..... | ..... | ..... | 3½ | 27½ | |
| Sarnia Bay | 8 | ..... | ..... | ..... | 43¾ | 268½ | |
| Totals, hours | 24 | 12 | ..... | ..... | 107¼ | 724½ | |

General Remarks: Dredge put into commission at Sarnia, Ont., on May 4th, 1914; laid up for season at Sarnia, Ont., on December 31st, 1914.

## DREDGE, P. W. D. No. 115 ("OTTAWA"), PROVINCE OF QUEBEC

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 3,984 | 11,029 | 3,042 | 11,169 | 15,280 | 4,012 | | | | | | 51,516 |
| Class of material | | Sand, clay, gravel, hardpan | Hardpan, rock, boulders | Hardpan, rock, boulders, sand old piers. | Sand, rock, clay, boulders | Sand, clay, boulders, gravel | Sand, boulders | | | | | | |
| Total possible dredging time ..... hrs | | 70 | 260 | 274½ | 260 | 260 | 90 | | | | | | 1,214½ |
| Total time lost.. hrs | | 23 | 103½ | 201 | 117 | 147 | 63 | | | | | | 654½ |
| Hours actually dredging | | 47 | 156½ | 73½ | 143 | 113 | 27 | | | | | | 560 |
| C.yds. handled per hour | | 85 | 90 | 41½ | 78 | 135½ | 148½ | | | | | | 92 |

### Details of Expenditure by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September | October. | November. | December | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Wages | | 260 36 | 1,104 89 | 872 35 | 883 73 | 878 98 | 1,064 80 | 752 86 | 62 28 | | | 186 89 | 6,067 14 |
| Fuel, Coal and Oil | 10 96 | 257 50 | 484 04 | 1,185 60 | 1,804 20 | | | 827 35 | | | | 44 51 | 4,614 16 |
| Water | | | | | | 171 60 | | 80 00 | | | | | 251 60 |
| Subsistence | 89 45 | 118 37 | 392 95 | 392 80 | 356 55 | 330 00 | 402 12 | 201 56 | 4 50 | | 17 00 | 34 14 | 2,339 44 |
| Pilotage | | | 35 00 | | | 30 00 | | | | | | | 65 00 |
| Stores / Machinery | 50 95 | 143 03 | 34 30 | 314 20 | 94 70 | 210 34 | 2 00 | 112 32 | 19 70 | 3 38 | | 221 32 | 1,206 24 |
| Stores \ General | 32 28 | 176 83 | | 35 84 | | | | | 2 35 | | | 22 61 | 269 91 |
| Repairs / Material | 250 10 | 577 21 | 1,095 60 | 232 88 | 733 32 | 40 00 | 92 93 | 2,572 12 | 22 81 | 577 15 | 171 36 | 2,304 89 | 8,670 37 |
| Repairs \ Wages | 801 44 | 636 41 | 93 69 | 162 65 | 110 95 | 158 60 | 139 94 | | 249 95 | 196 39 | 182 86 | 347 44 | 3,080 32 |
| Rental of tugs | | 10 00 | | | 240 00 | | | | | | 60 00 | | 310 00 |
| Contingencies | 61 05 | | 24 77 | | | | | 87 53 | 32 50 | 34 34 | 4 20 | 524 59 | 768 98 |
| Total Expenses | 1,296 23 | 2,179 71 | 3,265 24 | 3,196 32 | 4,223 45 | 1,819 52 | 1,701 79 | 4,633 74 | 394 09 | 811 26 | 435 42 | 3,686 39 | 27,643 16 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Monitor* | May 18.. | Sept. 19.. | Longueuil, Que., Ile aux Coudre Murray Bay. | |
| *Storm King* | Sept. 21.. | Oct. 10.. | Port au Saumon | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| "*Mekinac*" | June 11.. | ..... | Government wharf | 5 00 |
| | June 17.. | ..... | R. & O. | 5 00 |
| *Florence* | July 27.. | July 28.. | Ile aux Coudres | 240 00 |
| *Serieuz* | Sept. 24 | ..... | Port au Saumon | 60 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Longueuil, Government wharf | 1,484 28 | 1,128 82 | 61 55 | 572 32 | ..... | 15 90 | 295 10 | 66 03 | 2,121 14 | 753 57 | 5 00 | 188 12 | 6,691 83 |
| " R. & O. wharf | 720 48 | 547 93 | 29 88 | 277 81 | ..... | 7 72 | 143 24 | 32 05 | 1,029 61 | 365 79 | 5 00 | 91 32 | 3,250 83 |
| Quebec, Allans' wharf | 633 80 | 482 02 | 26 28 | 244 39 | ..... | 6 79 | 126 01 | 28 20 | 905 74 | 321 79 | ..... | 80 33 | 2,855 35 |
| Ile aux Coudres | 1,224 26 | 931 07 | 50 77 | 472 06 | ..... | 13 12 | 243 40 | 54 46 | 1,749 56 | 621 56 | 240 00 | 155 17 | 5,755 43 |
| Murray Bay | 1,375 94 | 1,046 42 | 57 06 | 530 55 | ..... | 14 74 | 273 55 | 61 21 | 1,966 32 | 698 57 | ..... | 174 39 | 6,198 75 |
| Port aux Saumon | 628 38 | 477 90 | 26 06 | 242 31 | ..... | 6 73 | 124 94 | 27 96 | 898 00 | 319 04 | 60 00 | 79 65 | 2,890 97 |
| Totals | 6,067 14 | 4,614 16 | 251 60 | 2,339 44 | ..... | 65 00 | 1,206 24 | 269 91 | 8,670 37 | 3,080 32 | 310 00 | 768 98 | 27,643 16 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. yds. Moved. | Possible Work Hours. | Actual Dredging. | Hour-Cost Actually Work hours. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Longueuil, Government wharf | May 23 | June 15 | Sand, clay, rock, hardpan, gravel. | 12,851 | 200 | 137 | $48·8454 | ·5207 |
| " R. & O. wharf | June 16 | June 24 | Hardpan, rock, boulders | 5,162 | 80 | 66½ | 48·8846 | ·6297 |
| Quebec, Allans' wharf | July 1 | July 25 | Hardpan, rock, boulders old pier. | 2,176 | 274½ | 58½ | 48·8094 | 1·3122 |
| Ile aux Coudres | July 30 | Aug. 21 | Rock, boulders, sand | 7,333 | 240 | 113 | 50·9330 | ·7848 |
| Murray Bay | Aug. 25 | Sept. 18 | Sand, clay, boulders, gravel. | 15,734 | 240 | 127 | 48·8090 | ·3939 |
| Port aux Saumon | Sept. 24 | Oct. 10 | Sand, boulders, clay | 8,260 | 180 | 58 | 49·8443 | ·3499 |
| Totals | | | | 51,516 | 1,214½ | 560 | $49·3627 | ·5365 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Longueuil, Government wharf | 38 | 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13 | ..... |
| " R. & O. wharf | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Quebec, Allans' wharf | 75 | ..... | 20 | ..... | 84½ | ..... | ..... | ..... | 30 | 5 | ..... |
| Ile aux Coudres | 21 | ..... | 10 | ..... | 66 | ..... | ..... | ..... | 30 | ..... | ..... |
| Murray Bay | 38 | 7 | 26 | ..... | 18 | ..... | ..... | ..... | ..... | 4 | ..... |
| Port au Saumon | 72 | ..... | 10 | ..... | 9 | ..... | 25 | ..... | 6 | ..... | ..... |
| Totals hours | 245 | 16 | 66 | ..... | 177½ | ..... | 25 | ..... | 66 | 22 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Sounding. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Longueuil, Government wharf | 1 | 2 | ..... | ..... | ..... | 63 | Outside service inspection included in expenditure. |
| " R. & O. wharf | 2½ | ..... | ..... | ..... | 10 | 13½ | |
| Quebec, Allans' wharf | 1½ | ..... | ..... | ..... | ..... | 216 | |
| Ile aux Coudres | ..... | ..... | ..... | ..... | ..... | 127 | |
| Murray Bay | ..... | 17 | ..... | 3 | ..... | 113 | |
| Port au Saumon | ..... | ..... | ..... | ..... | ..... | 122 | |
| Totals, hours | 5 | 19 | ..... | 3 | 10 | 654½ | |

General Remarks: Dredge put into commission at Montreal, Que., on May 14; laid up for season at Quebec, Que., on December 1, 1914

## DREDGE, P.W.D. No. 116 ("PROGRESS") PROVINCE OF QUEBEC.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 3,396 | 17,798 | 29,916 | 11,040 | 20,640 | 14,160 | | | | | | 96,950 |
| Class of material | | Hardpan boulders. | Hardpan boulders, clay. | Clay. | Clay, boulders. | Clay, boulders. | Clay, boulders. | | | | | | |
| Total possible dredging time ..... hrs | | 80 | 260 | 270 | 260 | 260 | 230 | | | | | | 1,360 |
| Total time lost ... hrs | | 28 | 96¼ | 68 | 113 | 60 | 83 | | | | | | 448¼ |
| Hours actually dredging | | 52 | 163¾ | 202 | 147 | 200 | 147 | | | | | | 911¼ |
| C.yds. handled per hour | | 65¼ | 108⅔ | 148 | 75 | 103 | 96⅓ | | | | | | 106⅓ |

### Details of Expenditure by Months.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts. |
| Wages | | 285 74 | 1,080 10 | 1,083 37 | 1,126 63 | 1,335 00 | 973 22 | 969 28 | 538 60 | | | 172 63 | 7,564 57 |
| Fuel, Coal and Oil | | 398 33 | 484 05 | 679 36 | 871 74 | 104 32 | 144 01 | 636 67 | 724 14 | | 289 48 | 44 51 | 4,376 61 |
| Water | | | | | | 80 00 | | | | | | | 80 00 |
| Subsistence | 194 10 | 113 01 | 402 00 | 385 80 | 419 64 | 427 80 | 366 80 | 284 05 | 114 35 | | 11 18 | 44 00 | 2,762 73 |
| Pilotage | | | 30 00 | | | | | | | | | | 30 00 |
| Stores (Machinery | 108 33 | 916 87 | | 462 90 | 117 69 | 76 90 | 545 91 | 20 16 | 9 45 | | | 496 26 | 2,754 47 |
| Stores (General | 63 46 | 74 73 | | | | 17 86 | | | | | 0 60 | 22 61 | 179 26 |
| Repairs (Material | 190 50 | 1,126 72 | 1,722 04 | 34 79 | 535 00 | 73 78 | 1,072 34 | 40 00 | | 1,571 54 | 311 91 | 9,047 77 | 15,726 39 |
| Repairs (Wages | 980 51 | 621 93 | 17 21 | 56 63 | 13 37 | | 117 16 | | 22 95 | 194 76 | 414 84 | 447 89 | 2,887 25 |
| Rental of tugs | | | | 475 00 | | 270 60 | | | | | | | 745 60 |
| Contingencies | 48 10 | 50 95 | 40 10 | 12 64 | 3 75 | 19 52 | 8 85 | 81 65 | 39 55 | 22 40 | | 495 71 | 823 22 |
| Total Expenses | 1,585 00 | 3,588 28 | 3,775 50 | 3,190 49 | 3,087 82 | 2,405 78 | 3,228 29 | 2,031 81 | 1,449 04 | 1,788 70 | 1,028 01 | 10,771 38 | 37,930 10 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts |
| *Archie Stewart* | May 18 | June 15 | Longueuil | |
| *Storm King* | June 15 | Sept. 19 | Riv. du Loup and Chicoutimi | |
| *Monitor* | Sept. 21 | Oct. 27 | Chicoutimi | |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts |
| *Ha Ha* | Aug. 18 | Sept. 2 | Chicoutimi | 270 60 |
| *Hackett* | June 19 | June 21 | Towing dredge from Quebec to Riv. du Loup. | 475 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. |
| Longueuil R. & O. Wharf | 1,381 79 | 799 46 | 14 62 | 504 68 | ..... | ..... | 503 15 | 32 76 | 2,872 68 | 527 41 | ..... | 150 39 | 6,786 94 |
| River du Loup | 2,083 06 | 1,205 19 | 22 03 | 760 77 | ..... | 30 00 | 758 50 | 49 36 | 4,330 58 | 795 07 | 475 60 | 226 70 | 10,736 26 |
| Chicoutimi | 4,099 72 | 2,371 96 | 43 35 | 1,497 28 | ..... | ..... | 1,492 82 | 97 14 | 8,523 13 | 1,564 77 | 270 60 | 446 15 | 20,406 92 |
| Totals | 7,564 57 | 4,376 61 | 80 00 | 2,762 73 | ..... | 30 00 | 2,754 47 | 179 26 | 15,726 39 | 2,887 25 | 745 60 | 823 24 | 37,930 12 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Longueuil R. & O. Wharf | May 22 | June 15 | Hardpan, boulders | 13,687 | 210 | 166½ | $40·7624 | ·4958 |
| River du Loup | June 23 | July 29 | Clay | 37,423 | 380 | 251 | 42·7739 | ·2868 |
| Chicoutimi | Aug. 6 | Oct. 27 | Clay, boulders | 45,840 | 770 | 494 | 41·3095 | ·4451 |
| Totals | | | | 96,950 | 1,360 | 911½ | 41·6128 | ·3912 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Longueuil R. & O. Wharf | 9 | 11 | 9 | ..... | ..... | ..... | ½ | ..... | ..... | 10 | |
| River du Loup | 26 | 4 | 23 | ..... | 1 | ..... | ..... | ..... | 60 | 7 | |
| Chicoutimi | 30 | 20 | 15 | 25 | 110 | ..... | 4 | ..... | 30 | 3 | |
| Totals, hours | 65 | 35 | 47 | 25 | 111 | ..... | 4½ | ..... | 90 | 20 | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Longueuil R. & O. Wharf | 1 | 3 | ..... | ..... | ..... | 43½ | Outside service inspection included in above expenditure. |
| River du Loup | 2 | ..... | ..... | ..... | 6 | 129 | |
| Chicoutimi | 3 | 2 | ..... | 30 | 4 | 276 | |
| Totals, hours | 6 | 5 | ..... | 30 | 10 | 448½ | |

General Remarks: Dredge put into commission at Montreal, Que., on May 9, 1914; laid up for season at Quebec, Que., on Dec. 21, 1914.

DREDGE, P.W.D. No. 117 ("QUEBEC") PROVINCE OF ONTARIO.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 23,520 | 43,098 | 30,260 | 41,930 | 46,880 | 25,695 | | | | | 211,383 |
| Class of material | | | Gumbo clay. | Gumbo clay. | Gumbo clay. | Gumbo clay. | Gumbo clay. | Gumbo clay. | | | | | |
| Total possible dredging time hrs | | | 180 | 270 | 260 | 260 | 270 | 160 | | | | | 1,400 |
| Total time lost hrs | | | 54 | 80 | 136¼ | 107½ | 94 | 68¾ | | | | | 540¾ |
| Hours actually dredging | | | 126 | 1290 | 13¾ | 152½ | 176 | 91¼ | | | | | 859¼ |
| C.yds. handled per hour | | | 186⅔ | 226¾ | 204 | 275 | 275¾ | 279 | | | | | 238¾ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 840 88 | 1,167 90 | 1,018 54 | 1,211 58 | 1,194 17 | 1,208 91 | 878 06 | | | | 7,520 04 |
| Fuel, Coal and Oil | | 703 34 | | 983 85 | 367 40 | 670 37 | 299 92 | 801 43 | | 408 25 | | 29 55 | 4,264 11 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 417 40 | 348 42 | 382 07 | 387 10 | 374 48 | 380 25 | 405 55 | 201 91 | 6 50 | 4 23 | | 2,907 91 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | | 432 77 | 101 74 | 238 12 | 205 28 | 274 17 | 198 24 | 233 70 | 14 03 | 52 13 | | 150 71 | 1,909 89 |
| General | | 87 99 | | 2 10 | 23 15 | 26 87 | 5 00 | 9 12 | | 3 00 | | 13 87 | 171 10 |
| Repairs Material | 343 00 | 2,892 96 | 405 68 | 434 23 | 73 61 | 295 61 | 300 99 | 58 81 | 399 27 | 5 50 | 6 50 | 428 00 | 5,644 16 |
| Wages | 1,301 17 | 1,277 00 | 416 25 | 47 33 | 192 49 | 34 42 | 33 73 | 22 19 | | 115 00 | 115 00 | 194 51 | 3,749 09 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 13 85 | 14 19 | 6 22 | 6 27 | 1 60 | 5 88 | 6 64 | 6 35 | 2 39 | 59 05 | | 673 35 | 795 79 |
| Total expenses | 1,658 02 | 5,825 65 | 2,110 19 | 3,261 87 | 2,269 17 | 2,893 38 | 2,418 94 | 2,746 06 | 1,495 66 | 649 43 | 125 73 | 1,498 99 | 26,962 09 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS | | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | | | | | From | To | | |
| *Peel* | All season. | | $ cts. | | | | | $ cts. |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. |
| Hamilton—Oliver Plow Works | 7,520 04 | 4,264 11 | ..... | 2,907 91 | ..... | ..... | 1,909 89 | 171 10 | 5,644 16 | 3,749 09 | ..... | 795 79 | 26,962 09 |
| Totals | 7,520 04 | 4,264 11 | ..... | 2,907 91 | ..... | ..... | 1,909 89 | 171 10 | 5,644 16 | 3,749 09 | ..... | 795 79 | 26,962 09 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Hamilton—Oliver Plow Works | June 10 | Nov. 19 | Gumbo clay | 211,383 | 1,400 | 859¼ | $31·3695 | ·1275 |
| Totals | | | | 211,383 | 1,400 | 859¼ | $31·3695 | ·1275 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| | Hrs. | | | | | | | | | | |
| Hamilton—Oliver Plow Works | 112 | 62½ | 89 | ..... | ..... | 40 | 8 | ..... | 48½ | 5½ | 3¾ |
| Totals, hours | 112 | 62½ | 89 | ..... | ..... | 40 | 8 | ..... | 48½ | 5½ | 3¾ |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Hamilton—Oliver Plow Works, | 15 | 16 | 10 | ..... | 130¾ | 540¾ | Outside service inspection included in above expenditure. |
| Totals, hours | 15 | 16 | 10 | ..... | 130¾ | 540¾ | |

General remarks: Dredge put into commission at Hamilton, Ont., on May 1st, 1914; laid up for season at Hamilton, Ont., on Dec. 24th, 1914.

## DREDGE, P W D. No. 118 ("QUEEN") PROVINCE OF ONTARIO.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 2,775 | 6,179 | 5,846 | 6,151 | 6,659 | | | | | | 27,610 |
| Class of material | | | Clay | Clay | Clay | Clay | Clay | | | | | | |
| Total possible dredging time...hrs | | | 90 | 270 | 260 | 260 | 260 | | | | | | 1,140 |
| Total time lost...hrs | | | 4 | 98 | 64 | 54 | 52 | | | | | | 272 |
| Hours actually dredging | | | 86 | 172 | 196 | 206 | 208 | | | | | | 868 |
| C.yds. handled per hour | | | 32¼ | 35⅞ | 29¾ | 29¾ | 32 | | | | | | 31¾ |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 189 30 | 468 67 | 525 10 | 546 46 | 551 66 | 249 40 | | | | | 2,530 68 |
| Fuel, Coal and Oil | | 223 20 | 58 87 | | 292 52 | | 658 47 | | | | | 19 70 | 1,252 76 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 17 20 | 165 90 | 186 00 | 192 00 | 180 00 | 196 50 | 69 50 | | | | | 1,007 10 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores / Machinery | 2 38 | 267 88 | 61 42 | | 81 90 | 4 55 | 41 87 | 5 45 | | | | 122 34 | 587 79 |
| Repairs / General | 62 72 | 79 24 | 72 67 | | | | | | | | | 3 26 | 217 89 |
| Repairs / Material | 95 50 | 164 53 | 92 23 | 11 49 | 246 60 | 29 13 | 445 47 | | | 57 00 | 50 56 | 130 24 | 1,322 75 |
| Repairs / Wages | 1,585 38 | 450 00 | 1,370 51 | 157 33 | 29 90 | 227 54 | 14 46 | | 2 66 | 201 25 | | 122 85 | 4,161 88 |
| Rental of tugs | | | | | 50 00 | | | | 312 50 | | | | 362 50 |
| Contingencies | | 23 72 | 28 00 | 5 65 | 5 63 | | 12 25 | 21 65 | 6 32 | 39 45 | | 180 54 | 323 21 |
| Total Expenses | 1,745 98 | 1,225 77 | 2,038 99 | 829 14 | 1,423 65 | 987 68 | 1,920 68 | 346 00 | 321 48 | 297 70 | 50 56 | 578 93 | 11,766 56 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expense. | Name of Tug. | Employed. | Locality. | Expense. |
| | | | $ cts. | | From / To | | $ cts. |
| *Dora* | All season. | | | *Scotchman* | June 20. / June 22. | Ville Marie. | 50 00 |
| | | | | | Aug. 7. / Aug. 21. | New Liskeard | 312 50 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Ville Marie—New Dock | 752 20 | 372 36 | ..... | 299 34 | ..... | ..... | 174 71 | 64 76 | 393 17 | 1,237 05 | 50 00 | 96 07 | 3,439 66 |
| Haileybury Shipyard | 775 53 | 383 91 | ..... | 308 63 | ..... | ..... | 180 12 | 66 77 | 405 36 | 1,275 41 | ..... | 99 04 | 3,494 77 |
| New Liskeard Dock | 414 01 | 204 95 | ..... | 164 76 | ..... | ..... | 96 17 | 35 65 | 216 39 | 680 87 | 312 50 | 52 88 | 2,178 18 |
| Haileybury Dock | 588 94 | 291 54 | ..... | 234 37 | ..... | ..... | 136 79 | 50 71 | 307 83 | 968 55 | ..... | 75 22 | 2,653 95 |
| Totals | 2,530 68 | 1,252 76 | ..... | 1,007 10 | ..... | ..... | 587 79 | 217 89 | 1,322 75 | 4,161 88 | 362 50 | 323 21 | 11,766 56 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Ville Marie—New Dock | June 20 | July 28 | Clay | 8,954 | 330 | 258 | $13·3320 | ·3841 |
| | Aug. 1 | Aug. 4 | | | | | | |
| Haileybury Shipyard | Sept. 26 | Oct. 30 | " | 8,259 | 370 | 266 | 13·1382 | ·4231 |
| New Liskeard Dock | Aug. 6 | Aug. 25 | " | 4,292 | 190 | 142 | 15·3392 | ·5074 |
| Haileybury Dock | Aug. 28 | Sept. 24 | " | 6,105 | 250 | 202 | 13·1383 | ·4347 |
| Totals | ..... | ..... | ..... | 27,610 | 1,140 | 868 | $13·5559 | ·4261 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Ville Marie—New Dock | 42 | 5 | ..... | ..... | ..... | 10 | ..... | ..... | ..... | 2 | ..... |
| Haileybury Shipyard | 1 | 4 | 38 | ..... | ..... | ..... | 6 | ..... | 31 | 2 | ..... |
| New Liskeard Dock | 12 | 4 | 8 | 6 | ..... | ..... | 5 | 5 | 5 | 2 | ..... |
| Haileybury Dock | 6 | 10 | 1 | ..... | ..... | 10 | ..... | ..... | 10 | 7 | ..... |
| Totals, hours | 61 | 23 | 47 | 6 | ..... | 20 | 11 | 5 | 46 | 13 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Ville Marie—New Dock | 2 | ..... | 10 | ..... | 1 | 72 | Outside service inspection included in above expenditure. |
| Haileybury Shipyard | 3 | ..... | ..... | ..... | 19 | 104 | |
| New Liskeard Dock | 1 | ..... | ..... | ..... | ..... | 48 | |
| Haileybury Dock | 2 | ..... | ..... | ..... | 2 | 48 | |
| Totals, hours | 8 | ..... | 10 | ..... | 22 | 272 | |

General Remarks: Dredge put into commission at Haileybury on June 11; laid up for season at Haileybury, on Nov. 21.

## DREDGE, P.W.D. No. 119 ("RICHELIEU") PROVINCE OF QUEBEC

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 2,826 | 3,647 | 3,069 | 3,538 | 6,032 | 3,016 | | | | | 22,128 |
| Class of material | | | Clay, sand, stones. | Clay, stones | Clay stones | Clay, stones | Clay | Clay, sand | | | | | |
| Total possible dredging time hrs | | | 180 | 270 | 260 | 260 | 267 | 129 | | | | | 1,366 |
| Total time lost hrs | | | 62½ | 80 | 81 | 97½ | 60½ | 29½ | | | | | 411 |
| Hours actually dredging | | | 117½ | 190 | 179 | 162½ | 206½ | 99½ | | | | | 955 |
| C.yds. handled per hour | | | 24 | 19¼ | 17 | 21¾ | 29¼ | 30⅓ | | | | | 23 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 338 34 | 494 02 | 470 25 | 407 77 | 549 72 | 529 25 | 79 04 | | | 172 63 | 3,041 02 |
| Fuel, Coal and Oil | | | 5 00 | 217 62 | 240 58 | | 203 75 | 208 80 | 95 00 | | | 41 78 | 1,012 53 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 72 09 | 157 50 | 170 50 | 193 50 | 215 50 | 190 60 | 183 00 | 13 60 | 35 38 | | 34 15 | 1,265 82 |
| Stores Machinery | | 487 97 | 8 26 | 32 49 | 45 68 | 72 27 | 79 08 | 37 87 | 23 79 | 9 23 | 7 00 | 155 87 | 959 51 |
| Stores General | 50 | | | | | 3 00 | | | | 4 18 | | 24 78 | 32 46 |
| Repairs Material | 133 52 | 172 39 | 23 08 | | 10 60 | | 95 29 | 178 85 | 2 08 | 347 42 | 124 80 | 850 29 | 1,918 32 |
| Repairs Wages | 498 00 | 408 83 | 155 99 | 22 97 | 99 75 | 162 23 | 42 59 | 120 94 | 64 52 | 294 74 | 557 91 | 605 31 | 3,033 78 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 38 20 | 21 85 | | | 27 50 | 16 83 | | 72 32 | | 42 00 | 454 96 | 673 66 |
| Total Expenses | 612 02 | 1,179 48 | 710 02 | 937 60 | 1,060.45 | 888 27 | 1,177 86 | 1,258 71 | 350 35 | 690 95 | 731 71 | 2,339 68 | 11,937 10 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| | | | | $ cts | | | | | $ cts. |
| *Ottawa* | All season | | | | | | | | |
| *Lion* | Aug. 1. | Nov. 17. | St. Denis.<br>St. Antoine.<br>St. Marc.<br>Beloeil Station.<br>Sturgeon Bay. | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. |
| Beloeil—G.T.R. Bridge | 103 49 | 34 46 | ..... | 43 09 | ..... | ..... | 32 66 | 1 12 | 65 30 | 103 25 | ..... | 22 93 | 406 30 |
| Beloeil—Canadian Explosive Wharf | 70 05 | 23 33 | ..... | 29 17 | ..... | ..... | 22 11 | 0 76 | 44 22 | 69 89 | ..... | 15 52 | 275 05 |
| St. Antoine—Quintal and Lynch Wharf | 85 98 | 28 63 | ..... | 35 80 | ..... | ..... | 27 13 | 0 93 | 54 25 | 85 77 | ..... | 19 05 | 337 54 |
| St. Denis Gov. Wharf | 2,284 74 | 760 70 | ..... | 950 98 | ..... | ..... | 720 87 | 24 34 | 1,441 26 | 2,279 29 | ..... | 506 12 | 8,968 30 |
| St. Marc—Larue Wharf | 63 69 | 21 22 | ..... | 26 52 | ..... | ..... | 20 10 | 0 69 | 40 09 | 63 54 | ..... | 14 11 | 249 96 |
| Sturgeon Bay—Ile aux Noix | 433 07 | 144 19 | ..... | 180 26 | ..... | ..... | 136 64 | 4 62 | 273 20 | 432 04 | ..... | 95 93 | 1,699 95 |
| Totals | 3,041 02 | 1,012 53 | ..... | 1,265 82 | ..... | ..... | 959 51 | 32 46 | 1,918 32 | 3,033 78 | ..... | 673 66 | 11,937 10 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Beloeil—G.T.R. Bridge | June 10. | June 13. | Clay, sand | 747 | 40 | 32½ | $12·5015 | ·5439 |
| Beloeil—Canadian Explosives Wharf | Oct. 21 | Oct. 23. | Clay | 464 | 30 | 22 | 12·5022 | ·5927 |
| St. Antoine—Quintal and Lynch Wharf | Oct. 14. | Oct. 16 | Clay | 399 | 30 | 27 | 12·5014 | ·8459 |
| St. Denis—Gov. Wharf | June 16 | Oct. 13. | Clay, stones | 15,610 | 1,040 | 717½ | 12·4993 | ·5745 |
| St. Marc—Larue Wharf | Oct. 17 | Oct. 20. | Clay | 406 | 30 | 20 | 12·4980 | ·6156 |
| Sturgeon Bay—Ile aux Noix | Oct. 27 | Nov. 17. | Clay, sand | 4,002 | 196 | 136 | 12·4996 | ·4247 |
| Totals | | | | 21,628 | 1,366 | 955 | $12·4995 | ·5519 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Beloeil—G.T.R. Bridge | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 6½ | ..... | ..... |
| Beloeil—Canadian Explosives Wharf | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8 | ..... | ..... |
| St. Antoine—Quintal and Lynch Wharf | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| St. Denis—Gov. Wharf | 138 | 9 | 1 | ..... | 2 | 20 | 58 | ..... | 12 | 6½ | 1 |
| St. Marc—Larue Wharf | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 9 | ..... | ..... |
| Sturgeon Bay—Ile aux Noix | 32 | 1 | ..... | ..... | ..... | ..... | ..... | 11 | 10 | 1 | ..... |
| Totals, hours | 170 | 11 | 1 | ..... | 2 | 20 | 58 | 11 | 45½ | 7½ | 1 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Beloeil—G.T.R. Bridge | ..... | ..... | ..... | ..... | ..... | 7½ | Outside service inspection included in above expenditure. |
| Beloeil—Canadian Explosives Wharf | ..... | ..... | ..... | ..... | ..... | 8 | |
| St. Antoine—Quintal and Lynch Wharf | 2 | ..... | ..... | ..... | 1 | 3 | |
| St. Denis—Gov. Wharf | ..... | 1 | ..... | 71 | 3 | 322½ | |
| St. Marc—Larue Wharf | 1 | ..... | ..... | ..... | ..... | 10 | |
| Sturgeon Bay—Ile aux Noix | ..... | ..... | ..... | ..... | 5 | 60 | |
| Totals, hours | 3 | 1 | ..... | 71 | 9 | 411 | |

General Remarks: Dredge put into commission at Chambly, Que., on June 1st; laid up for season at Chambly, Que., on November 30th, 1914.

DREDGE, P. W. D. No. 120 ("SIR RICHARD"), PROVINCE OF ONTARIO.

DETAILS OF MATERIAL AND TIME BY MONTHS.

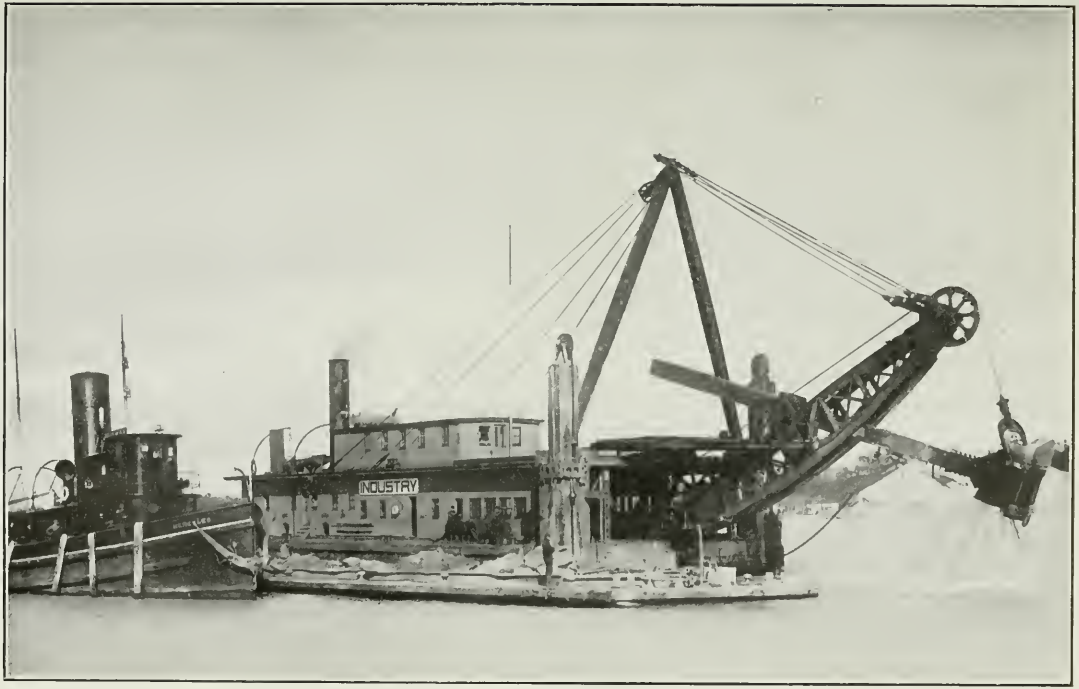
| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 10,050 | 13,350 | 13,050 | 8,050 | 9,260 | 4,405 | | | | | 58,165 |
| Class of material | | | Sand. | Sand, clay, gravel. | Sand, clay, gravel. | Sand, clay.. | Sand, clay.. | Sand, clay, stones. | | | | | |
| Total possible dredging time | | | 160 | 279 | 260 | 260 | 270 | 150 | | | | | 1,379 |
| Total time lost | | | 39 | 117½ | 111 | 139½ | 136½ | 91½ | | | | | 635 |
| Hours actually dredging | | | 121 | 161½ | 149 | 120½ | 133½ | 58½ | | | | | 744 |
| Cubic yds. handled per hour | | | 83 | 82⅞ | 87½ | 66⅞ | 69⅛ | 75¼ | | | | | 78 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 351 12 | 544 07 | 527 25 | 550 36 | 529 72 | 647 39 | 133 23 | | | 3,283 14 |
| Fuel, coal, and oil | | 64 26 | 9 85 | | 58 64 | 154 00 | 675 61 | 196 46 | 169 11 | | 19 70 | 1,347 63 |
| Water | | | | | | | | | | | | |
| Subsistence | 23 00 | 239 20 | 194 25 | 178 75 | 206 40 | 174 51 | 180 00 | 252 85 | 39 00 | | | 1,487 96 |
| Stores { Machinery | 194 82 | 379 13 | 59 04 | 11 75 | 80 00 | 15 42 | 116 83 | 26 75 | 9 65 | 2 64 | 85 88 | 981 91 |
| Stores { General | 0 75 | 234 56 | 7 40 | | | | 1 90 | 1 80 | | | 12 24 | 258 65 |
| Repairs { Material | 169 68 | 644 61 | 536 81 | 113 73 | 42 27 | 1 20 | 179 16 | 48 67 | 231 18 | 75 40 | 2,627 99 | 4,670 70 |
| Repairs { Wages | 642 24 | 617 72 | 234 21 | 27 83 | 65 87 | 27 80 | 75 23 | 11 97 | 92 63 | 121 00 | 176 70 | 2,193 20 |
| Rental of tugs | | | | | | | 50 00 | | | | | 50 00 |
| Contingencies | 2 40 | 30 17 | | 1 58 | 3 25 | 26 92 | 3 74 | 6 45 | 6 75 | 97 50 | 29 65 | 791 73 | 1,000 14 |
| Total expenses | 1,032 89 | 2,209 65 | 1,392 68 | 877 71 | 983 68 | 950 21 | 1,812 19 | 1,192 34 | 681 55 | 296 54 | 129 65 | 3,714 24 | 15,273 33 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| *Trudeau* | All season | | | $ cts. | Tug *Chocton* | Sept. 9 | | Towing to Port Stanley | $ cts. 50 00 |




Dredge "Industry" No. 109, Ontario.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Port Burwell, Ont. | 1,284 13 | 527 10 | ..... | 581 98 | ..... | ..... | 384 03 | 101 16 | 1,826 85 | 857 82 | ..... | 391 18 | 5,954 25 |
| Port Bruce, Ont. | 712 67 | 292 53 | ..... | 323 00 | ..... | ..... | 213 13 | 56 15 | 1,013 87 | 476 08 | ..... | 217 11 | 3,304 54 |
| Port Stanley, Ont. | 1,286 34 | 528 00 | ..... | 582 98 | ..... | ..... | 384 75 | 101 34 | 1,829 98 | 859 30 | 50 00 | 391 85 | 6,014 54 |
| Totals. | 3,283 14 | 1,347 63 | ..... | 1,487 96 | ..... | ..... | 981 91 | 258 65 | 4,670 70 | 2,193 20 | 50 00 | 1,000 14 | 15,273 33 |

| Expenses Working at | Time Working. | | Kind of Material. | No. Cubic Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Port Burwell, Ont. | June 12 | June 27 | Sand, clay, gravel | 24,800 | 500 | 291 | $20·4613 | ·2400 |
| | Aug. 15 | Sept. 8 | ..... | | | | | |
| Port Bruce, Ont. | July 2 | July 31 | Clay, sand, gravel | 13,350 | 269 | 161½ | 20·4615 | ·2475 |
| Port Stanley, Ont. | Sept. 12 | Nov. 18 | Clay, sand, stones | 20,015 | 610 | 291½ | 20·6330 | ·3005 |
| Totals | ..... | ..... | ..... | 58,165 | 1,379 | 744 | $20·5286 | ·2625 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Port Burwell, Ont. | 33 | 5 | 82 | ..... | ..... | 20 | 8 | 5 | 6 | 15 | ..... |
| Port Bruce, Ont. | 10 | 2½ | 52 | ..... | ..... | ..... | ..... | ..... | 5 | 10 | ..... |
| Port Stanley, Ont. | 33½ | 17½ | 190½ | ½ | ..... | 10 | ..... | ..... | 14 | 20 | ..... |
| Totals, hours | 76½ | 25 | 324½ | ½ | ..... | 30 | 8 | 5 | 25 | 45 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Port Burwell, Ont. | 1 | 10 | ..... | ..... | 24 | 209 | Outside service inspection included in expenditure. |
| Port Bruce, Ont. | ½ | 10 | ..... | ..... | 17½ | 107½ | |
| Port Stanley, Ont. | ..... | ..... | 20 | ..... | 12½ | 318½ | |
| Totals, hours | 1½ | 20 | 20 | ..... | 54 | 635 | |

General Remarks: Dredge put into commission at Port Burwell, Ont., on May 16; laid up for season at Port Stanley, Ont., on December 15, 1914.

DREDGE, P.W.D. No. 121 ("ST. LOUIS") PROVINCE OF QUEBEC.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 855 | 2,076 | 3,315 | 2,655 | 2,950 | 2,550 | 2,164 | | | | | 16,565 |
| Class of material | | Boulders, stones. | Boulders, stones, sand. | Boulders, sand. | Sand, boulders, hardpan. | Stones, sand, boulders, hardpan. | Sand, boulders, gravel, hardpan. | Boulders, gravel, sand. | | | | | |
| Total possible dredging time | | 150 | 260 | 270 | 260 | gravel, 260 | 270 | 190 | | | | | 1,660 |
| Total time lost | | 52¼ | 95½ | 65½ | 63½ | 53 | 84 | 56 | | | | | 469¾ |
| Hours actually dredging | | 97¾ | 164½ | 204½ | 196½ | 207 | 186 | 134 | | | | | 1,190¼ |
| C.yds. handled per hour | | 8¾ | 12⅔ | 16 | 13½ | 14 | 13⅔ | 16⅛ | | | | | 14 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 291 96 | 467 45 | 486 11 | 461 39 | 480 58 | 440 42 | 475 26 | 98 38 | | | | 3,201 55 |
| Fuel, Coal and Oil | | 106 40 | 141 47 | 109 20 | | 531 86 | 241 29 | 65 38 | | | | 19 70 | 1,215 30 |
| Water | | | | | | | | | | | | | |
| Subsistence | 32 45 | 201 41 | 168 00 | 178 50 | 184 75 | 204 16 | 190 50 | 169 20 | 59 85 | | | 2 25 | 1,391 07 |
| Verdun (removal of boulders, etc.) | | | | 349 42 | | | | | | | | | 349 42 |
| Pilotage | | 61 00 | | | | | | | | | | | 61 00 |
| Stores Machinery | 81 70 | 228 56 | 36 94 | 110 72 | 3 95 | 69 02 | 22 40 | 30 42 | 11 24 | | | 84 39 | 679 34 |
| Stores General | 12 98 | 113 51 | | | | 5 83 | | | | | | 3 26 | 135 58 |
| Repairs Material | 120 00 | 236 63 | 823 36 | 147 02 | 455 32 | 40 40 | 224 12 | 25 44 | 11 93 | 64 58 | 18 05 | 145 50 | 2,312 35 |
| Repairs Wages | 370 00 | 218 47 | 109 60 | 120 57 | 123 13 | 120 69 | 269 92 | 77 91 | 98 38 | 150 00 | 100 00 | 219 73 | 1,978 40 |
| Rental of tugs | | 800 00 | | | | | | | | | | | 800 00 |
| Contingencies | 20 60 | 2 60 | 90 20 | 5 10 | | 3 45 | | 22 98 | 15 75 | 13 10 | | 182 54 | 356 32 |
| Total Expenses | 637 73 | 2,260 54 | 1,837 02 | 1,506 64 | 1,228 54 | 1,455 99 | 1,388 65 | 866 59 | 295 53 | 227 68 | 118 05 | 657 37 | 12,480 33 |

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expense. | Name of Tug. | Employed. | Locality. | Expense. |
| | | | $ cts | | From / To | | $ cts. |
| *Mina G* | All season. | | | *Hudson* | May 8. | Towing Montreal to Verdun | 800 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. |
| | | | Removal | of | boulders | at Verdon. | | | | | | | |
| Verdun | 455 93 | 173 07 | 349 42 | 198 10 | 8 69 | ..... | 96 74 | 19 31 | 329 29 | 281 73 | 400 00 | 50 74 | 2,363 02 |
| Verdun G T R. Boat Club | 2,745 62 | 1,042 23 | ..... | 1,192 97 | 52 31 | ..... | 582 60 | 116 27 | 1,983 06 | 1,696 67 | 400 00 | 305 58 | 10,117 31 |
| Totals | 3,201 55 | 1,215 30 | 349 42 | 1,391 07 | 61 00 | ..... | 679 34 | 135 58 | 2,312 35 | 1,978 40 | 800 00 | 356 32 | 12,480 33 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Verdun | May 14..... | June 9..... | Boulders, stones ... | 1,665 | 230 | 169½ | $13·941 | $1·4192 |
| Verdun G T R. Boat Club | June 17..... | Nov. 23..... | Boulders, stones, hardpan, sand, gravel. | 14,900 | 1,430 | 1,020¾ | 9·911 | ·6790 |
| Totals | ..... | ..... | ..... | 16,565 | 1,660 | 1,190¼ | $10·485 | ·7534 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs | Orders. | | Fuel. | Water |
| Verdun | 9½ | 8 | 12 | .. | .. | 20 | 2 | .. | 1 | 5 | .. |
| Verdun G T R Boat Club | 163½ | 35 | 35 | ..... | 6 | 30 | 12½ | .. | 33½ | 16¼ | .. |
| Totals, hours | 173 | 43 | 47 | ..... | 6 | 50 | 14½ | ..... | 34½ | 21¼ | |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Verdun | 1 | .. | ..... | .. | 2 | 60½ | Outside service included in above totals |
| Verdun G T R Boat Club | 13 | 8 | .. | 3 | 53½ | 409¼ | |
| Totals, hours | 14 | 8 | .. | 3 | 55½ | 469¾ | |

General Remarks: Dredge put into commission at Montreal, on May 5; laid up for season at Verdun, Que., on Dec. 10, 1914

DREDGE, P. W. D. No. 122 ("ST. MAURICE"), PROVINCE OF QUEBEC.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 3,751 | 6,038 | 9,435 | 4,879 | | | | | | 24,103 |
| Class of material | | | | Gravel... | Gravel.. | Gravel.. | Gravel... | | | | | | |
| Total possible dredging time.....hrs | | | | 150 | 260 | 260 | 190 | | | | | | 860 |
| Total time lost | | | | 62 | 138 | 64 | 68 | | | | | | 528 |
| Hours actually dredging | | | | 88 | 122 | 196 | 122 | | | | | | 332 |
| C.yds. handled per hour | | | | 42 | 49 | 48 | 40 | | | | | | 45·6 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | 367 72 | 555 54 | 541 69 | 987 46 | 702 09 | | | | 3,154 50 |
| Fuel, coal, and oil | | 144 88 | 7 50 | 149 86 | 157 47 | | | | | | | | 459 71 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 8 46 | | | 150 80 | 186 45 | 193 50 | 254 05 | | | | | 793 86 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | | | 219 37 | 34 18 | 11 13 | 50 43 | 14 68 | 18 35 | 8 70 | | | | 356 85 |
| Stores (General | | 39 34 | 13 26 | 127 60 | 9 20 | 1 20 | 57 30 | | | | | | 247 90 |
| Repairs (Material | 49 50 | 66 25 | 79 75 | 169 20 | 158 50 | 35 45 | 62 17 | 10 73 | | 262 28 | | | 893 89 |
| Repairs (Wages | 261 34 | 519 30 | 434 05 | 580 10 | 305 68 | 48 46 | 62 31 | 32 57 | 50 00 | 497 59 | 50 00 | 50 00 | 2,891 40 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 7 95 | | 12 31 | 5 62 | 23 00 | 12 00 | 6 00 | 1 77 | 3 25 | | | 71 90 |
| Total expenses | 310 84 | 786 18 | 753 93 | 1,073 31 | 1,166 12 | 900 54 | 943 65 | 1,309 76 | 762 56 | 763 12 | 50 00 | 50 00 | 8,870 01 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | Locality. | Expenses. |
| | From | To | | $ cts. | | From To | | |
| *Annette* | July 15.. | Oct. 22.. | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Ile aux Morpions | 525 75 | 76 62 | ..... | 132 31 | ..... | ..... | 59 47 | 41 32 | 148 99 | 481 90 | ..... | 11 98 | 1,478 34 |
| Ricard Crossing | 669 14 | 97 51 | ..... | 168 39 | ..... | ..... | 75 70 | 52 59 | 189 61 | 613 33 | ..... | 15 25 | 1,881 52 |
| Pte. Trudel | 1,392 04 | 202 86 | ..... | 350 32 | ..... | ..... | 157 47 | 109 39 | 394 45 | 1,275 93 | ..... | 31 72 | 3,914 18 |
| Ile aux Fraises | 340 54 | 49 63 | ..... | 85 70 | ..... | ..... | 38 52 | 26 76 | 96 50 | 312 14 | ..... | 7 77 | 957 56 |
| Pte. Madeline | 227 03 | 33 09 | ..... | 57 14 | ..... | ..... | 25 69 | 17 84 | 64 34 | 208 10 | ..... | 5 18 | 638 41 |
| Totals | 3,154 50 | 459 71 | ..... | 793 86 | ..... | ..... | 356 85 | 247 90 | 893 89 | 2,891 40 | ..... | 71 90 | 8,870 01 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Ile aux Morpions | July 15 | July 25 | Gravel | 3,751 | 100 | 88 | $16 68 | ·3941 |
| Ricard Crossing | Aug. 5 | Aug. 19 | " | 5,683 | 265 | 112 | 16 80 | ·3311 |
| Pte. Trudel | " 31 | Oct. 3 | " | 11,470 | 335 | 233 | 16 79 | ·3412 |
| Ile aux Fraises | Oct. 7 | " 14 | " | 1,756 | 90 | 57 | 16 79 | ·5453 |
| Pte. Madeline | " 16 | " 22 | " | 1,443 | 70 | 38 | 16 80 | ·4424 |
| Totals | | | | 24,103 | 860 | 528 | $16 80 | ·3679 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Ile aux Morpions | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 | ..... | ..... |
| Ricard Crossing | 85 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pte. Trudel | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 32 | ..... | ..... |
| Ile aux Fraises | ..... | 5 | ..... | ..... | ..... | ..... | ..... | ..... | 25 | ..... | ..... |
| Pte. Madelino | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10 | ..... | ..... |
| Totals, hours | 150 | 9 | ..... | ..... | ..... | ..... | ..... | ..... | 72 | ..... | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Ile aux Morpions | 6 | ..... | ..... | ..... | ..... | 12 | |
| Ricard Crossing | 6 | ..... | ..... | ..... | 58 | 153 | |
| Pte. Trudel | 12 | 3 | 10 | ..... | ..... | 102 | |
| Ile aux Fraises | 3 | ..... | ..... | ..... | ..... | 33 | |
| Pte. Madeline | 3 | ..... | ..... | ..... | ..... | 32 | |
| Totals, hours | 30 | 3 | 10 | ..... | 58 | 332 | |

General Remarks: Dredge put into commission at Pointe Madeline on June 15, 1914; laid up for season at Pointe Madeline on Nov 7, 1914
58 hours miscellaneous time, " Dredge aground."

DREDGE P.W.D No. 123 (PROVINCE OF QUEBEC.)

DETAILS OF MATERIAL AND TIME BY MONTHS

| Items | April. | May. | June. | July. | August. | September. | October | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,410 | 11,615 | 4,502 | 8,771 | 6,442 | 2,514 | 1,695 | | | | | 36,949 |
| Class of material | | Sand, gravel hardpan | Hardpan, boulders, clay, rock. | Hardpan, boulders, rock. | Hardpan. boulders | Hardpan, boulders, rock. | Hardpan, boulders, rock. | Hardpan, bouders | | | | | |
| Total possible dredging time hrs | | 120 | 260 | 270 | 260 | 260 | 270 | 120 | | | | | 1,560 |
| Total time lost. hrs | | 87 | 87½ | 141 | 67 | 75½ | 82 | 61 | | | | | 601 |
| Hours actually dredging | | 33 | 172½ | 129 | 193 | 184½ | 188 | 59 | | | | | 959 |
| C.yds. handled per hour | | 43 | 67¼ | 34¾ | 45⅓ | 34⅞ | 13⅓ | 28¾ | | | | | 38½ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 261 24 | 439 06 | 572 51 | 544 40 | 512 26 | 469 55 | 448 80 | 257 89 | | | 172 63 | 3,678 34 |
| Fuel, Coal and Oil | | 167 05 | 432 71 | | | 577 07 | | 290 85 | | | | 102 16 | 1,569 84 |
| Water | | | | | | | | | | | | | |
| Subsistence | 5 50 | 131 08 | 174 00 | 228 75 | 193 26 | 190 20 | 196 50 | 194 60 | 32 00 | | | 45 31 | 1,391 20 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | | 139 93 | 119 98 | 436 30 | | 260 62 | 69 88 | 296 50 | 4 10 | | | 217 51 | 1,544 82 |
| General | | 75 38 | | 1 60 | | 8 40 | 1 00 | | | | | 26 77 | 113 15 |
| Repairs Material | 181 35 | 696 55 | 317 50 | 919 67 | 41 20 | 295 36 | 438 49 | 392 08 | 130 92 | 122 83 | 103 81 | 389 85 | 4,029 61 |
| Wages | 728 34 | 479 39 | 155 26 | 74 51 | 543 89 | 351 43 | 536 62 | 287 85 | 254 72 | 329 00 | 469 04 | 316 66 | 4,526 71 |
| Rental of Tugs | | | | 25 00 | | | | | | | | | 25 00 |
| Contingencies | 6 00 | | 6 60 | | | | 22 63 | 44 85 | 39 32 | 28 90 | | 436 38 | 584 68 |
| Total Expenses | 921 19 | 1,950 62 | 1,645 11 | 2,258 34 | 1,322 75 | 2,195 34 | 1,734 67 | 1,955 53 | 718 95 | 480 73 | 572 85 | 1,707 27 | 17,463 35 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

DEPARTMENT TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Fashion* | July 6 | Aug. 15 | Ste. Anne de Bellevue | |
| Tug *Fashion* | Aug. 31 | Nov. 14 | Ste. Anne de Bellevue | |
| " *Delisle* | Aug. 17 | Aug. 30 | " " | |

RENTED TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| Tug *Alaska* | July 14 | | Assisting dredge up current to Ste. Anne de Bellevue | 25 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. |
| Longueuil—Armstrong and Whitworth Dock | 865 15 | 369 24 | ..... | 327 21 | ..... | ..... | 363 34 | 26 62 | 947 78 | 1,064 68 | ..... | 137 53 | 4,101 55 |
| Ste. Anne de Bellevue | 2,813 19 | 1,200 60 | ..... | 1,063 99 | ..... | ..... | 1,181 48 | 86 53 | 3,081 83 | 3,462 03 | 25 00 | 447 15 | 13,361 80 |
| Totals | 3,678 34 | 1,569 84 | ..... | 1,391 20 | ..... | ..... | 1,544 82 | 113 15 | 4,029 61 | 4,526 71 | 25 00 | 584 68 | 17,463 35 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Longueuil—Armstrong & Whitworth Dock | May 18 | July 3 | Sand, gravel, clay, hard-pan, boulders, rock | 13,650 | 480 | 222½ | $18·4339 | ·3004 |
| Ste. Anne de Bellevue | July 20 | Nov. 14 | Hardpan, rock, boulders | 23,299 | 1,080 | 723½ | 18·4682 | ·5734 |
| Totals | | | | 36,949 | 1,560 | 946 | $18·4602 | ·4726 |

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Longueuil—Armstrong & Whitworth Dock | 163½ | 18 | 45½ | ..... | ..... | 20 | 4 | ..... | 1 | ..... | ..... |
| Ste. Anne de Bellevue | 250½ | 8 | 8 | ..... | ..... | 10 | 3 | ..... | 30 | 30 | ..... |
| Totals, hours | 414 | 26 | 53½ | ..... | ..... | 30 | 7 | ..... | 31 | 30 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Longueuil—Armstrong & Whitworth Dock | 4 | ..... | ..... | ..... | 1½ | 257½ | Overcast at Longueuil—13425. |
| Ste. Anne de Bellevue | 7 | 10 | ..... | ..... | ..... | 356½ | Overcast at Ste. Anne de Bellevue—6584 |
| Totals, hours | 11 | 10 | ..... | ..... | 1½ | 614 | Outside service inspection included in above expenditure. |

General Remarks: Dredge put into commission at Montreal, Que., on April 30, 1914; laid up for season at Ste. Anne de Bellevue on December 12th, 1914.

DREDGE, P.W D. No. 124, PROVINCE OF QUEBEC.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | 1,392 | 3,490 | 5,325 | | | | | | 10,267 |
| Class of material | | | | | Clay | Hardpan | Hardpan | | | | | | |
| Total possible dredging time hrs | | | | | Hardpan 150 | 260 | 270 | | | | | | 680 |
| Total time lost hrs | | | | | 75 | 89 | 143 | | | | | | 373 |
| Hours actually dredging | | | | | 75 | 171 | 127 | | | | | | 307 |
| C. yds. handled per hour | | | | | 19 | 20⅓ | 42 | | | | | | 33⅓ |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | | 90 45 | 120 12 | 229 12 | 330 85 | 16 45 | | | | 786 99 |
| Fuel, Coal and Oil | | | | | 216 00 | | 7 00 | | 13 50 | | | 19 70 | 256 20 |
| Water | | | | | | 14 00 | 53 00 | 3 50 | | | | | 70 50 |
| Subsistence | | | | | 19 75 | 71 00 | 103 22 | 56 35 | 3 25 | | | | 253 57 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | 25 00 | | | | | | | | 25 00 |
| Stores / Machinery | | | | | 18 10 | | 66 62 | 11 77 | | | | 62 34 | 158 83 |
| Stores / General | | | | 4 25 | | 2 82 | | 4 63 | | | | 3 26 | 14 96 |
| Repairs / Material | | | | | 39 77 | 16 63 | 2 55 | 32 29 | 18 07 | 34 15 | | | 144 36 |
| Repairs / Wages | | | | 760 37 | 118 81 | 184 73 | 41 24 | 139 71 | 18 07 | 120 23 | 40 00 | 46 13 | 1,469 29 |
| Rental of tugs | | | | | 20 00 | 50 00 | | | | 15 00 | | | 85 00 |
| Contingencies | | | | | 5 50 | 43 45 | 7 70 | 35 65 | 11 80 | 1 00 | | 14 93 | 120 03 |
| Total Expenses | | | | 764 62 | 553 38 | 502 75 | 510 45 | 614 75 | 82 04 | 170 38 | 40 00 | 146 36 | 3,384 73 |

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. |
| | | | | | *Montmorency* | Aug. 6. | | Towing to Grand Nord | 20 00 |
| | | | | | | " 11. | | Towing scow Three Rivers to Maskinonge. | 50 00 |
| | | | | | | Oct. 29. | | Towing dredge from Bois Blanc to Maskinonge. | 15 0 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. |
| Maskinonge, Que | 786 99 | 256 20 | 70 50 | 253 57 | ..... | 25 00 | 158 83 | 14 96 | 144 36 | 1,469 29 | 85 00 | 120 03 | 3,384 73 |
| Totals | 786 99 | 256 20 | 70 50 | 253 57 | ..... | 25 00 | 158 83 | 14 96 | 144 36 | 1,469 29 | 85 00 | 120 03 | 3,384 73 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Maskinonge, Que | Aug. 14 | Oct. 31 | Clay, hardpan | 10,207 | 680 | 373 | $9·0743 | ·3316 |
| Totals | ..... | ..... | ..... | 10,207 | 680 | 373 | $9·0743 | ·3316 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs | Orders. | | Fuel. | Water. |
| Maskinonge, Que. (Cours d'eau du Bois Blanc) | 90 | 96 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, hours | 90 | 96 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Maskinonge, Que. (Cours d'eau du Bois Blanc) | 12 | 23 | ..... | ..... | 86 | 207 | |
| Totals, hours | 12 | 23 | ..... | ..... | 86 | 207 | |

General Remarks: Dredge put into commission at Ottawa, July 29, 1914, laid up for season at Three Rivers, on Nov. 6, 1914.

DREDGE, P. W. D. No. 201 ("ASSINIBOINE"), PROVINCE OF MANITOBA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 8,445 | 23,606 | 13,146 | 21,072 | 31,720 | 39,392 | 2,991 | | | | | 140,372 |
| Class of material | | Sand, clay. | Sand, clay, hard sand | Hard sand, clay, sandy clay | Clay, sandy clay. | Sandy clay, sand. | Sandy clay. | Sandy clay | | | | | |
| Total possible dredging time | | 140 | 260 | 270 | 260 | 260 | 270 | 40 | | | | | 1,500 |
| Total time lost | | 91 | 107 | 148 | 124 | 85 | 66 | 24 | | | | | 645 |
| Hours actually dredging | | 49 | 153 | 122 | 136 | 175 | 204 | 16 | | | | | 855 |
| C.yds handled per hour | | 172·3 | 154·3 | 107·8 | 154·2 | 181·3 | 193 | 187 | | | | | 164·2 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 278 71 | 459 99 | 460 00 | 460 00 | 460 00 | 456 12 | 45 98 | | | | | 2,620 80 |
| Fuel, coal and oil | | 209 55 | 207 90 | 201 30 | 204 93 | | 227 04 | | | | | | 1,050 72 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 76 09 | 161 97 | 380 52 | 177 10 | 270 39 | 449 52 | 28 40 | | | | | 1,543 99 |
| Wharfage | | | | | | | | | | | | | |
| Attendance and inspec'n | Tug *Victoria* and gasoline launch pro-rated for season | | | | | | | | | | | 694 72 | 694 72 |
| Stores (Machinery | 193 04 | 54 25 | 5 63 | 415 13 | 4 65 | 40 10 | 70 57 | | | | | | 783 37 |
| Stores (General | 4 46 | 69 25 | | | | | | | | | | | 73 71 |
| Repairs (Material | 47 45 | 14 04 | 7 07 | | 27 37 | | 45 04 | 42 64 | 66 74 | 4 74 | 3 45 | 69 46 | 328 00 |
| Repairs (Wages | 205 00 | 148 40 | 15 00 | | 73 50 | | 149 25 | 63 78 | 42 62 | | | | 697 55 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 2 00 | 2 00 | 2 00 | 2 00 | 2 00 | 2 00 | 2 00 | | | | | 14 00 |
| Total expenses | 449 95 | 852 29 | 859 56 | 1,458 95 | 949 55 | 772 49 | 1,399 54 | 182 76 | 109 36 | 4 74 | 3 45 | 764 18 | 7,806 86 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | Locality. | Expenses. | Name of Tug. | Employed. | Locality. | Expenses. |
| | | | $ cts. | | | | $ cts. |
| Tug *Victoria* and gasoline l'nch* | | | 694 72 | | | | |

* Employed in attendance and inspection laying out work and handling supplies, pro-rated for the season.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Attendance and Inspection | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Mouth of Red River, new channel | 763 26 | 306 00 | .... | 449 65 | ..... | 202 32 | 228 14 | 21 46 | 95 52 | 203 15 | ... | 4 08 | 2,273 58 |
| " " " Forks | 416 86 | 167 13 | ..... | 245 59 | ..... | 110 50 | 124 60 | 11 73 | 52 17 | 110 95 | .... .. | 2 23 | 1,241 76 |
| Selkirk, Middle ground | 1,440 68 | 577 59 | ..... | 848 75 | ..... | 381 90 | 430 63 | 40 52 | 180 31 | 383 45 | .. .. | 7 69 | 4,291 52 |
| Selkirk Slough | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals | 2,620 80 | 1,050 72 | ..... | 1,543 99 | ..... | 694 72 | 783 37 | 73 71 | 328 00 | 697 55 | ..... | 14 00 | 7,806 86 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost. Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Mouth of Red River, new channel | May 15 | June 11 | Sandy clay | 31,557 | 645 | 249 | 9 12 | ·072 |
| | July 7 | Aug. 15 | | | | | | |
| " " Forks | Sept. 7 | Sept. 12 | Sand | | | | | |
| | June 12 | July 7 | Hard sand and clay | 20,628 | 215 | 136 | 9 20 | ·06 |
| Selkirk, Middle Ground | Aug. 17 | Sept. 5 | Clay and sandy clay | 88,187 | 620 | 470 | 9 13 | ·048 |
| | Sept. 14 | Nov. 3 | Sandy clay | | | | | |
| Selkirk Slough | Nov. 4 | Nov. 5 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals | ..... | ..... | ..... | 140,372 | 1,500 | 855 | 9 13 | ·056 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Mouth of Red River, new channel | 18 | ..... | 134 | 14 | ..... | 20 | ..... | ..... | 52 | 4 | ... |
| " " Forks | 5 | ..... | 10 | ..... | ..... | 10 | ..... | ..... | .... | 15 | ... |
| Selkirk, Middle Ground | 20 | ..... | 3 | ..... | ..... | ..... | ..... | ..... | 3 | 21 | ... |
| Selkirk Slough | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ... |
| Totals, hours | 43 | ..... | 147 | 14 | ..... | 30 | ..... | ..... | 55 | 42 | ... |

| Time Lost at | Cleaning. | | Inspecting. Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Mouth of Red River, new channel | ..... | 11 | ..... | ..... | 143 | 396 | Driving piles 62 hrs.; repairs to protection work 55 hrs. included miscell. |
| " " Forks | ..... | 6 | ..... | ..... | 33 | 79 | Driving piles 20 hrs.; repairs to protection work 55 hrs. included miscell. |
| Selkirk, Middle Ground | ..... | 16 | ..... | ..... | 87 | 150 | Loading and unloading material 28 hrs. fitting up pontoons, 30 hrs. |
| Selkirk Slough | ..... | ..... | ..... | ..... | 18 | 20 | Driving piles, 18 hrs. |
| Totals, hours | ..... | 33 | ..... | ..... | 281 | 645 | |

General Remarks: Dredge put into commission at Selkirk, Man., on May 15, 1914; laid up for season at Selkirk, Man., on November 5, 1914.

## DREDGE, P.W.D. No. 202 (CRANE) PROVINCE OF MANITOBA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,977 | 7,733 | 15,583 | 9,735 | 6,272 | 8,438 | 560 | | | | | 50,298 |
| Class of material | | Clay | Clay | Clay | Clay | Clay and gravel. | Clay and gravel. | Gravel | | | | | |
| Total possible dredging time | | 120 | 260 | 270 | 260 | 260 | 270 | 60 | | | | | 1,500 |
| Total time lost....hrs | | 46 | 100½ | 33 | 94 | 91 | 64 | 35 | | | | | 463½ |
| Hours actually dredging | | 74 | 159½ | 237 | 166 | 169 | 206 | 25 | | | | | 1,036½ |
| C.yds. handled per hour | | 26·7 | 48·5 | 65·8 | 58·6 | 37·1 | 41 | 26·4 | | | | | 48·5 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 257 33 | 590 00 | 564 20 | 526 76 | 577 32 | 559 02 | 128 36 | | | | | 3,202 99 |
| Fuel, Coal and Oil | | 479 49 | 203 94 | 421 74 | 210 21 | 181 17 | 406 89 | | | | | | 1,903 44 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 241 12 | 198 18 | 310 91 | 254 22 | 284 73 | 256 48 | 34 21 | | | | | 1,579 85 |
| Wharfage | | | | | | | | | | | | | |
| Attendance & inspection | Tug *Victoria* and gasoline | | Launch pro-rata for the season | | | | | | | | | 694 72 | 694 72 |
| Stores { Machinery | 280 29 | 34 57 | 8 25 | 9 13 | 55 86 | 1 19 | 1 25 | | | | | | 390 54 |
| Stores { General | 1 32 | 77 10 | | | | | | | | | | | 78 42 |
| Repairs { Material | 56 88 | 14 04 | 7 07 | | 64 66 | | 45 04 | 38 65 | 53 54 | 2 93 | 3 45 | 190 91 | 477 17 |
| Repairs { Wages | 211 99 | 155 15 | 15 00 | | 63 00 | | | 135 04 | 63 78 | 42 62 | | 80 25 | 766 83 |
| Warren's Landing | | | | | | | 597 77 | 254 50 | | | | | 852 27 |
| Contingencies | | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | | | | | 28 00 |
| Total Expenses | 550 48 | 1,262 80 | 1,026 44 | 1,309 98 | 1,178 71 | 1,048 41 | 1,870 45 | 5 94 76 | 117 32 | 45 55 | 3 45 | 965 88 | 9,974 23 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |
| Tug *Lisgar* | May 18 | June 25 | Mouth of Red River | 849 18 |
| " | June 26 | Aug. 6 | Oak Point | 1,252 51 |
| " | Aug. 7 | Aug. 24 | Brokenhead | 445 85 |
| " | Aug. 24 | Aug. 29 | Marine Ry. | |
| " | Sept. 10 | Sept. 23 | " | |
| " | Oct. 8 | Oct. 30 | " | |
| " | Nov. 2 | Nov. 7 | " | 1,191 71 |
| " | Aug 31 | Sept. 9 | Selkirk Slough | |
| " | Sept. 24 | Oct. 8 | " | 462 10 |
| Tug *Victoria* & gasoline launch* | | | | |
| | | | | $4,201 35 |

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
|---|---|---|---|---|
| | | | | $ cts. |

*Employed in attendance and inspection, laying out work and hauling supplies pro-rated for the season.

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Attendance Inspection | Stores. | | Repairs. | | Warren's Landing. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts |
| Mouth of Red River, new channel | 647 39 | 384 72 | ..... | 319 32 | ..... | 140 42 | 78 94 | 15 85 | 96 45 | 154 99 | 172 26 | 5 66 | 2,016 00 |
| Oak Point | 954 87 | 567 46 | ..... | 470 99 | ..... | 207 11 | 116 43 | 23 38 | 142 25 | 228 61 | 254 08 | 8 35 | 2,973 53 |
| Brokenhead | 330 90 | 201 99 | ..... | 167 65 | ..... | 73 72 | 41 44 | 8 32 | 50 64 | 81 36 | 90 44 | 2 97 | 1,058 45 |
| Marine Ry., Selkirk | 908 53 | 539 91 | ..... | 448 12 | ..... | 197 06 | 110 78 | 22 24 | 135 35 | 217 51 | 241 75 | 7 94 | 2,829 19 |
| Selkirk Slough | 352 30 | 209 36 | ..... | 173 77 | ..... | 76 41 | 42 95 | 8 63 | 52 48 | 84 34 | 93 74 | 3 08 | 1,097 06 |
| Totals | 3,202 99 | 1,903 44 | ..... | 1,579 85 | ..... | 694 72 | 390 54 | 78 42 | 477 17 | 766 83 | 852 27 | 28 00 | 9,974 23 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Mouth of Red River, new channel | May 18 | June 25 | Clay | 8,412 | 340 | 209½ | $9·62 | ·239 |
| Oak Point | June 26 | Aug. 6 | " | 19,738 | 360 | 309 | 9·62 | ·150 |
| Brokenhead | Aug. 7 | Aug. 24 | " | 6,646 | 146 | 110 | 9·62 | ·159 |
| Marine Railway, Selkirk | Aug. 24 | Aug. 29 | | | | | | |
| | Sept. 10 | Sept. 23 | Gravel | 9,602 | 428 | 294 | 9·62 | ·294 |
| | Oct. 8 | Oct. 30 | | | | | | |
| | Nov. 2 | Nov. 7 | | | | | | |
| Selkirk Slough | Aug. 31 | Sept. 9 | Clay | 5,900 | 226 | 114 | 9·62 | ·185 |
| | Sept. 24 | Oct. 8 and 31 | | | | | | |
| Totals | | | | 50,298 | 1,500 | 1,036½ | 9·62 | ·198 |

## Explanation of Unavoidable Loss of Time.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Mouth of Red River, new channel | 36 | 3 | 20½ | ..... | ..... | 10 | ..... | 10 | 30 | 5 | ..... |
| Oak Point | ..... | ..... | ..... | ..... | ..... | 10 | ..... | ..... | 13 | 3 | ..... |
| Brokenhead | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8 | 2 | ..... |
| Marine Railway, Selkirk | 3 | ..... | ..... | ..... | ..... | ..... | 12 | 15 | 29 | 2 | ..... |
| Selkirk Slough | 31 | 2 | ..... | ..... | ..... | 10 | 5 | 26 | 20 | 8 | ..... |
| Totals, hours | 89 | 5 | 20½ | ..... | ..... | 30 | 17 | 51 | 100 | 20 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Mouth of Red River, new channel | ..... | 15 | ..... | ..... | 1 | 130½ | |
| Oak Point | ..... | 15 | ..... | ..... | 10 | 51 | |
| Brokenhead | ..... | 7 | ..... | ..... | ..... | 36 | |
| Marine Railway, Selkirk | ..... | 30 | ..... | ..... | 43 | 134 | |
| Selkirk Slough | ..... | 10 | ..... | ..... | ..... | 112 | |
| Totals, hours | ..... | 77 | ..... | ..... | 54 | 463½ | |

General Remarks: Dredge put into commission at Selkirk, Manitoba, on May 18, 1914; laid up for season at Selkirk, Manitoba, on November 7, 1914.

## DREDGE, P.W D. No. 203 ("DAUPHIN") PROVINCE OF MANITOBA

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,318 | 6,770 | 6,226 | 5,660 | 5,674 | | | | | | | 25,648 |
| Class of material | | Clay, stone, sand & mud | Sand, clay, & hardpan | Hardpan, rock, stone & gravel. | Clay, mud, hardpan, rock. | Hardpan, rock, mud, stone, sand & gravel. | | | | | | | |
| Total possible dredging time ..... hrs | | 80 | 260 | 270 | 260 | 260 | | | | | | | 1,130 |
| Total time lost ..... hrs | | 46 | 80¼ | 62 | 156¾ | 157 | | | | | | | 501¾ |
| Hours actually dredging | | 34 | 179¾ | 208 | 103¼ | 103 | | | | | | | 628¼ |
| C.yds. handled per hour | | 39 | 37·7 | 29·9 | 54·6 | 55 | | | | | | | 40·8 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 179 21 | 546 67 | 550 00 | 510 00 | | 547 33 | | 40 00 | | | | 2,373 21 |
| Fuel, Coal and Oil | 702 00 | 256 22 | 14 00 | 234 59 | 11 60 | | | | 15 85 | | | | 1,234 26 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 171 05 | 366 80 | 269 10 | 366 63 | | 443 33 | | | 128 10 | | | 1,745 01 |
| Wharfage | | | | | | | | | | | | | |
| Contgs. and investig'ns. | | | | | | | 332 60 | 21 73 | | | | | 354 33 |
| Stores / Machinery | | 209 40 | 57 68 | 124 44 | 160 44 | | 77 95 | | | 24 15 | 0 85 | | 654 91 |
| Stores \ General | | | | | | | | | | 3 40 | | | 3 40 |
| Repairs / Material | 58 35 | 260 11 | 196 25 | 22 10 | 21 03 | | 33 70 | | | | | | 591 54 |
| Repairs \ Wages | 50 00 | 131 59 | | 100 00 | | | 71 01 | 60 00 | 50 00 | 50 00 | | | 512 60 |
| Rental of tugs | | | | | 675 00 | | 387 50 | | | | | | 1,062 50 |
| Contingencies | | 24 95 | 2 45 | 3 80 | 8 25 | | 11 00 | 2 00 | 4 50 | | | | 56 95 |
| Total Expenses ... | 810 35 | 1,232 53 | 1,183 85 | 1,304 03 | 1,752 95 | | 1,904 42 | 83 73 | 110 35 | 205 65 | 0 85 | | 8,588 71 |

### Details of Tug Service—Tugs in attendanee, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. |
| | | | | | *Iona* | May 21 | June 13 | Winnipegosis | |
| | | | | | " | July 28 | Sept. 2 | " | |
| | | | | | *Isabella* | Sept. 3 | Sept. 30 | " | 1,732 11 |
| | | | | | *Iona* | June 15 | July 27 | Snake Island | 1,580 53 |
| | | | | | | | | | 3,312 64 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Contingencies Investigation. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Winnipegosis—Mossy river | 1,132 31 | 588 89 | ..... | 832 58 | ..... | 169 06 | 312 47 | 1 62 | 282 24 | 244 57 | 506 94 | 27 17 | 4,097 85 |
| Snake Is. Hatchery | 1,240 90 | 645 37 | ..... | 912 43 | ..... | 185 27 | 342 44 | 1 78 | 309 30 | 268 03 | 555 56 | 29 78 | 4,490 86 |
| Totals | 2,373 21 | 1,234 26 | ..... | 1,745 01 | ..... | 354 33 | 654 91 | 3 40 | 591 54 | 512 60 | 1,062 50 | 56 95 | 8,588 71 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Winnipegosis—Mossy R | May 22 | June 13 | Clay, stone, sand & hardpan. | | | | | |
| " | July 28 | Sept. 30 | Clay, mud, hardpan, rock. | 16,408 | 760 | 299½ | $13.67 | ·249 |
| Snake Is. Hatchery | June 15 | July 27 | Clay, gravel, rock. | 9,240 | 370 | 328½ | 13.67 | ·486 |
| Total | | | | 25,648 | 1,130 | 628½ | 13.67 | ·335 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Winnipegosis—Mossy R | 57 | 3 | 25 | 3 | ..... | ..... | 259¼ | 21½ | 10½ | 7 | ..... |
| Snake Is. Hatchery | 4½ | 2 | 10 | ..... | ..... | 4 | 3 | ..... | ..... | 3 | ..... |
| Totals, hours | 61½ | 5 | 35 | 3 | ..... | 4 | 262¼ | 21½ | 10½ | 10 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Winnipegosis—Mossy R | ..... | 5 | 5 | ..... | 64 | 460½ | |
| Snake Is. Hatchery | ..... | 3 | ..... | ..... | 12 | 41½ | |
| Totals, hours | ..... | 8 | 5 | ..... | 76 | 501½ | |

Dredge put into commission at Winnipegosis, Man., on May 22, 1914; laid up for season at Winnipegosis on Sept. 30, 1914.

General Remarks: Included in Tug Expenditure is share of subsistence ..... $634 55
" " " cordwood ..... 500 00

$1,134 55

DREDGE, P W D. No. 204 (RED RIVER) PROVINCE OF MANITOBA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 2,832 | 7,649 | 7,655 | 14,042 | 8,621 | 13,294 | 2,478 | | | | | 56,571 |
| Class of material | | Clay & sand rock. | Clay | Clay, rock & gravel. | Clay, rock | Clay, gravel | Clay | Clay | | | | | |
| Total possible dredging time | | 100 | 260 | 270 | 260 | 260 | 270 | 60 | | | | | 1,480 |
| Total time lost | | 34 | 120 | 135 | 75 | 96 | 77 | 8 | | | | | 545 |
| Hours actually dredging | | 66 | 140 | 135 | 185 | 164 | 193 | 52 | | | | | 935 |
| C.yds. handled per hour | | 43 | 54·6 | 56·7 | 76 | 52·6 | 69 | 49 | | | | | 60·5 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Wages | | 366 45 | 675 00 | 673 70 | 669 82 | 669 00 | 669 83 | 157 50 | | | | | 3,881 30 |
| Fuel, Coal and Oil | | 482 79 | 210 54 | 421 41 | 264 99 | 210 21 | 490 05 | | | | | | 2,079 99 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 252 56 | 280 14 | 156 64 | 363 41 | 266 58 | 231 56 | 31 80 | | | | | 1,582 69 |
| Wharfage | | | | | | | | | | | | | |
| Attendance & inspection | * | | | | | | | | | | | 694 72 | 694 72 |
| Stores / Machinery | 307 20 | 33 76 | 7 68 | 85 59 | 27 76 | 49 50 | | | | | | | 511 49 |
| Stores / General | 3 94 | 84 65 | | | | 8 75 | | | | | | | 97 34 |
| Repairs / Material | 191 71 | 14 04 | 8 74 | | 10 00 | | 45 04 | 49 05 | 54 04 | 2 93 | 3 45 | 190 91 | 569 91 |
| Repairs / Wages | 270 00 | 134 93 | 15 00 | | | | | 150 88 | 63 77 | 42 63 | | 80 25 | 757 46 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | 4 00 | | | | | 28 00 |
| Total Expenses | 772 85 | 1,373 18 | 1,201 10 | 1,341 34 | 1,339 98 | 1,208 04 | 1,440 48 | 393 23 | 117 81 | 45 56 | 3 45 | 975 88 | 10,202 90 |

* Tug *Victoria* and Gasoline launch pro-rated for the season.

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

DEPARTMENT TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Peguis* | May 20 | June19&22 | Winnipeg | 816 33 |
| " | June20&23 | June 24 | Winnipeg Beach | 486 89 |
| " | July 18 | Aug. 1 | " | |
| " | June 25 | June 27 | Marine Ry. | 609 34 |
| " | July 14 | July 17 | " | |
| " | Sept. 7 | Sept.21,28 | 29 " | |
| " | June 29 | July 13 | Brokenhead | 379 02 |
| " | Aug. 3 | Aug. 19 | Gimli | 437 31 |
| " | Aug. 20 | Sept. 5 | Black River | 437 31 |
| " | Sept. 22 | Sept. 26 | Selkirk Slough | 1,148 66 |
| " | Sept. 29 | Nov. 7 | " | |
| *Victoria* and Gasoline Launch* | | | | |
| | | | | 4,314 86 |

RENTED TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |

*Employed in attendance and inspection, laying out work and handling supplies pro-rated for the season.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Attendance and inspection. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
| Winnipeg | 755 51 | 404 88 | ..... | 308 07 | ..... | 135 24 | 99 57 | 18 95 | 110 91 | 147 43 | ..... | 5 45 | 1,986 01 |
| Winnipeg Beach | 311 34 | 166 85 | ..... | 126 96 | ..... | 55 73 | 11 03 | 7 82 | 45 73 | 60 75 | ..... | 2 21 | 818 42 |
| Marine Ry. Selkirk | 390 21 | 209 12 | ..... | 159 13 | ..... | 69 84 | 51 43 | 9 80 | 57 32 | 76 15 | ..... | 2 75 | 1,025 75 |
| Brokenhead | 269 81 | 144 59 | ..... | 110 02 | ..... | 48 29 | 35 56 | 6 76 | 39 61 | 52 65 | ..... | 2 00 | 709 29 |
| Gimli | 452 47 | 242 48 | ..... | 184 50 | ..... | 80 99 | 59 60 | 11 34 | 66 43 | 88 33 | ..... | 3 29 | 1,189 43 |
| Black River | 456 62 | 244 70 | ..... | 186 20 | ..... | 81 73 | 60 17 | 11 44 | 67 06 | 89 12 | ..... | 3 30 | 1,200 34 |
| Selkirk Slough | 1,245 34 | 667 37 | ..... | 507 81 | ..... | 222 90 | 164 13 | 31 23 | 182 85 | 243 03 | ..... | 9 00 | 3,273 66 |
| Totals | 3,881 30 | 2,079 99 | ..... | 1,582 69 | ..... | 694 72 | 511 49 | 97 34 | 569 91 | 757 46 | ..... | 28 00 | 10,202 90 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | D. |
| Winnipeg | May 20 | June 19 & 20 | Clay | 9,676 | 280 | 182 | $10 91 | ·205 |
| Winnipeg Beach | June 22 & 23 | June 24 | Clay and rock | 4,484 | 167 | 75 | 10 91 | ·182 |
| | July 18 | Aug. 1 | | | | | | |
| Marine Ry. Selkirk | June 25 | June 27 | Clay | 2,999 | 209 | 94 | 10 91 | ·342 |
| | July 14 | July 17 | Gravel and rock | | | | | |
| | Sept. 7 | Sept. 21 | | | | | | |
| | " 28 | " 29 | Gravel and clay | | | | | |
| Brokenhead | June 29 | July 13 | Clay | 3,757 | 130 | 65 | 10 91 | ·188 |
| Gimli | Aug. 3 | Aug. 19 | Clay and rock | 6,431 | 150 | 109 | 10 91 | ·184 |
| Black River | Aug. 20 | Sept. 5 | Clay | 10,384 | 150 | 110 | 10 91 | ·115 |
| Selkirk Slough | Sept. 22 | Sept. 26 | Clay | 18,840 | 394 | 300 | 10 91 | ·173 |
| | " 29 | Nov. 7 | | | | | | |
| Totals | | | | 56,571 | 1,480 | 935 | 10 91 | ·180 |

General Remarks: Dredge put into commission at Selkirk, Manitoba, on May 15, 1914; laid up for season at Selkirk, Manitoba, on Nov. 7, 1914.

## DREDGE, P. W. D. No. 205 ("WINNIPEG"), PROVINCE OF MANITOBA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 5,707 | 14,764 | 16,600 | 13,541 | 16,835 | 12,649 | 500 | | | | | 80,596 |
| Class of material | | Gumbo, clay gravel | Gravel, clay sand, mud | Sand, mud, clay | Sand, mud | Clay, mud | Clay, mud, gravel | Gravel | | | | | |
| Total possible dredging time | | 140 | 260 | 270 | 260 | 260 | 270 | 40 | | | | | 1,500 |
| Total time lost | | 28 | 75 | 65 | 102 | 79 | 35 | 30 | | | | | 414 |
| Hours actually dredging | | 112 | 185 | 205 | 158 | 181 | 235 | 10 | | | | | 1,086 |
| C.yds. handled per hour | | 51 | 99·8 | 81 | 85·7 | 93 | 53·8 | 50 | | | | | 74·2 |

### Details of Expenditure by Months.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 372 88 | 708 00 | 711 29 | 661 06 | 693 99 | 713 05 | 119 99 | | | | | 3,984 16 |
| Fuel, coal, and oil | | 456 39 | 213 84 | 498 63 | 267 63 | 212 52 | 494 01 | | | | | | 2,143 02 |
| Subsistence | | 230 40 | 362 92 | 342 48 | 280 33 | 219 54 | 347 27 | 62 52 | | | | | 1,845 55 |
| Attendance & Inspect'n | Tug *Victoria* and gasoline launch pro-rated for the season. | | | | | | | | | | | 694 71 | 694 71 |
| Stores (Machinery | 373 89 | 49 27 | 108 48 | 93 43 | 79 85 | 138 31 | 1 75 | | | | | | 844 98 |
| Stores (General | 4 24 | 90 05 | | 1 24 | | 2 25 | | | | | | | 97 78 |
| Repairs (Material | 55 67 | 14 04 | 7 07 | | 78 04 | 39 75 | 57 87 | 53 00 | 103 43 | 3 48 | 12 65 | 190 91 | 615 91 |
| Repairs (Wages | 245 00 | 15 00 | | | 132 00 | | | 196 39 | 63 77 | 42 63 | | 350 75 | 1,255 87 |
| Contingencies | | 4 00 | 10 40 | 4 00 | 4 00 | 4 00 | 34 00 | 4 00 | | | | | 64 40 |
| Total expenses | 678 80 | 1,427 45 | 1,425 71 | 1,651 07 | 1,506 81 | 1,310 36 | 1,647 95 | 435 90 | 167 20 | 46 11 | 12 65 | 1,236 37 | 11,546 38 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| | | | | $ cts. | | | | | $ cts. |
| *Friday* | May 15 | June 16 | Marine railway | 810 70 | | | | | |
| " | Sept. 25 | Oct. 2 | " | 204 19 | | | | | |
| " | Oct. 8 | Nov. 5 | " | 750 58 | | | | | |
| " | June 17 / July 21 / Aug. 8 | July 16 / Aug. 15 / Sept. 24 | Winnipeg | 2,332 89 | | | | | |
| " | July 18 | July 21 | Lockport | 99 08 | | | | | |
| " | Aug. 3 | Aug. 7 | Selkirk Slough | 150 11 | | | | | |
| " | Oct. 2 | Oct. 7 | Park Point | 126 10 | | | | | |
| *Victoria* and gasoline launch* | | | | | | | | | |
| Total | | | | 4,503 65 | | | | | |

* Employed in attendance and inspection, laying out work, and handling supplies pro-rated for the season.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Attendance and Inspect'n. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Marine Railway Basin | 832 77 | 447 93 | ..... | 385 76 | ..... | 145 21 | 176 62 | 20 44 | 128 74 | 262 50 | ..... | 13 46 | 2,413 43 |
| " removing old railway | 143 07 | 76 96 | ..... | 66 27 | ..... | 24 05 | 30 34 | 3 51 | 22 12 | 45 10 | ..... | 2 31 | 414 63 |
| " backfill | 722 73 | 388 74 | ..... | 334 78 | ..... | 126 02 | 153 28 | 17 74 | 111 73 | 227 81 | ..... | 11 68 | 2,094 51 |
| Winnipeg | 2,131 49 | 1,146 49 | ..... | 987 35 | ..... | 371 66 | 452 06 | 52 31 | 329 50 | 671 88 | ..... | 34 46 | 6,177 20 |
| Lockport | 36 65 | 19 72 | ..... | 16 98 | ..... | 6 39 | 7 77 | 0 90 | 5 66 | 11 56 | ..... | 0 59 | 106 22 |
| Park Point | 117 45 | 63 18 | ..... | 54 41 | ..... | 20 48 | 24 91 | 2 88 | 18 16 | 37 02 | ..... | 1 96 | 340 39 |
| Totals | 3,684 16 | 2,143 02 | ..... | 1,845 55 | ..... | 694 71 | 844 98 | 97 78 | 615 91 | 1,255 87 | ..... | 64 40 | 11,546 38 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Marine Railway Basin | May 15 | June 16 | Gumbo, clay, gravel | 14,457 | 280 | 227 | 10 63 | ·166 |
| " removing old railway | Sept. 25 | Oct. 2 | Clay, mud and gravel | 3,000 | 68 | 39 | 10 63 | ·138 |
| " backfill | Oct. 8 | Nov. 5 | Gravel | 7,875 | 250 | 197 | 10 63 | ·265 |
| Winnipeg | June 17 | July 16 | Sand, mud, clay | 51,190 | 777 | 581 | 10 63 | ·120 |
| | July 21 | Aug. 1 | | | | | | |
| | Aug. 8 | Sept. 24 | | | | | | |
| Lockport | July 18 | July 21 | Boulder and boiler | ..... | 33 | 10 | 10 62 | ..... |
| Park Point | Oct. 2 | Oct. 7 | Weed | 4,074 | 42 | 32 | 10 63 | ·083 |
| " | Aug. 3 | Aug. 7 | Raising *Lady of the Lake*; putting boiler in Tug *Sir Hector* | ..... | 50 | ..... | ..... | ..... |
| Totals | ..... | ..... | ..... | 80,596 | 1,500 | 1,086 | $10 63 | ·143 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Marine Railway Basin | 7 | 5 | ..... | ..... | ..... | 10 | ..... | 7 | ..... | 12 | ..... |
| " removing old railway | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 10 | 1 | ..... |
| " backfill | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 4 | ..... |
| Winnipeg | 25 | 7 | ..... | ..... | ..... | 10 | 4 | ..... | 31 | 13 | ..... |
| Lockport | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 23 | ..... | ..... |
| Selkirk Slough | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 25 | 5 | ..... |
| Park Point | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... |
| Totals, hours | 42 | 12 | ..... | ..... | ..... | 20 | 4 | 7 | 93 | 35 | ..... |

DREDGE, P. W. D. No- 205 ("WINNIPEG") PROVINCE OF MANITOBA—*Concluded.*

EXPLANATION OF UNAVOIDABLE LOSS OF TIME—*Concluded.*

| Time Lost at | Cleaning. Plant. | Cleaning. Boilers. | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| Marine Railway Basin | | 12 | | | | 53 | |
| " removing old railway | | 5 | | | 12 | 29 | |
| " backfill | | 5 | | | 36 | 53 | 30 hrs. at test, included in Miscell'ous. |
| Winnipeg | | 57 | | | 49 | 196 | |
| Lockport | | | | | | 23 | |
| Selkirk Slough | | | | | 20 | 50 | 10 hrs. raising *Lady of the Lake*, and 10 hours putting boiler in *Sir Hector*, included in Miscellaneous. |
| Park Point | | 5 | | | | 10 | |
| Totals, hours | | 84 | | | 117 | 414 | |

General Remarks: Dredge put into commission at Selkirk, Man., on May 15, 1914; laid up for season at Selkirk, Man., on November 5, 1914.

DREDGE, P.W.D. No. 206, PROVINCE OF ALBERTA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 3,499 | 5,397 | 2,928 | 5,347 | 2,368 | | | | | | 19,539 |
| Class of material | | | Gumbo | Gumbo | Gumbo | Clay, rocks. | Clay, rocks. | | | | | | |
| Total possible dredging time hrs | | | 200 | 270 | 260 | 260 | 160 | | | | | | 1,150 |
| Total time lost hrs | | | 118 | 125 | 177 | 104 | 70 | | | | | | 594 |
| Hours actually dredging | | | 82 | 145 | 83 | 156 | 90 | | | | | | 556 |
| C.yds. handled per hour | | | 42¾ | 37¼ | 35¼ | 34¼ | 26¼ | | | | | | 35 |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 367 50 | 230 74 | 151 45 | 289 90 | 136 58 | | | | | | 1,176 17 |
| Fuel, Coal and Oil | | | | | | | | | | | 412 50 | | 412 50 |
| Subsistence | | | 218 00 | 213 15 | 228 47 | 188 18 | 296 70 | 63 15 | 13 95 | 14 40 | 17 20 | 35 40 | 1,288 60 |
| Stores/Machinery | | | | | | 56 60 | | 425 00 | 1 50 | | | | 483 00 |
| \General | | | 30 40 | 5 50 | | | | | 2 00 | | | | 37 90 |
| Repairs/Material | | 194 35 | 140 00 | 83 20 | 109 07 | 71 40 | | | | | | 339 41 | 1,241 36 |
| \Wages | | 406 10 | | 144 21 | 223 55 | 85 10 | 208 42 | 133 35 | 63 00 | 45 00 | 45 00 | 45 00 | 1,428 73 |
| Contingencies | | | 5 00 | | 60 25 | 39 00 | | 126 35 | 23 28 | | | | 253 88 |
| Total Expenses | | 600 45 | 760 90 | 676 80 | 772 79 | 730 08 | 975 63 | 747 85 | 103 73 | 59 40 | 474 70 | 419 81 | 6,322 14 |

DETAILS OF TUG SERVICE.—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | RENTED TUGS. | | | |
|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| | | | | | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | STORES. Machinery. | STORES. General. | REPAIRS. Material. | REPAIRS. Wages. | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grouard, Alberta | 1,176 17 | 412 50 | ..... | 1,288 60 | ..... | ..... | 483 00 | 37 90 | 1,241 36 | 1,428 73 | ..... | 253 88 | 6,322 14 |
| Totals | 1,176 17 | 412 50 | ..... | 1,288 60 | ..... | ..... | 483 00 | 37 90 | 1,241 36 | 1,428 73 | ..... | 253 88 | 6,322 14 |

| Expenses Working at | Time Working. From | Time Working. To | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| Grouard, Alberta | June 8, ..... | Oct. 19..... | Gumbo, clay, rocks.. ..... | 19,539 | 1,150 | 556 | $11·3707 | ·3235 |
| Totals | ..... | ..... | ..... | 19,539 | 1,150 | 556 | $11·3707 | ·3235 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | WAITING ON Scows, tugs. | WAITING ON Orders. | Towing, etc. | PROCURING Fuel. | PROCURING Water. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grouard, Alberta | 455 | 13 | 62 | ..... | ..... | 10 | ..... | ..... | 4 | ..... | ..... |
| Totals, hours.. | 455 | 13 | 62 | ..... | ..... | 10 | ..... | ..... | 4 | ..... | ..... |

| | CLEANING. Plant. | CLEANING. Boilers. | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| Grouard, Alberta | ..... | 50 | ..... | ..... | ..... | 594 | |
| Totals, hours | ..... | 50 | ..... | ..... | ..... | 594 | |

General Remarks: Dredge put into commission at Grouard, Alberta, on June 5th, 1914; laid up for season at Grouard, on November 5th, 1914.

## DREDGE, P. W. D. No. 207, PROVINCE OF SASKATCHEWAN.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September | October. | November | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | 3,201 | 3,104 | 2,036 | 1,432 | | | | | | 9,763 |
| Class of material | | | | Clay. | Clay | Clay | Clay | | | | | | |
| Total possible dredging time hrs | | | | gravel 220 | 260 | 250 | 140 | | | | | | 870 |
| Total time lost. hrs | | | | 145·5 | 190·5 | 205 | 107 | | | | | | 648 |
| Hours actually dredging | | | | 74·5 | 69·5 | 45 | 33 | | | | | | 222 |
| C.yds. handled per hour | | | | 42·9 | 44·6 | 45·2 | 43 | | | | | | |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | | 641 92 | 685 32 | 695 00 | 425 91 | | | | | | 2,448 15 |
| Fuel, coal, and oil | 366 76 | | | | 264 26 | | 267 72 | | | | | | 898 74 |
| Water | | | | | | | | | | | | | |
| Subsistence | 106 65 | 140 15 | 49 87 | 371 01 | 330 42 | 275 21 | 144 70 | 2 60 | | | | | 1,420 61 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores | | | | | | | | | | | | | |
| Repairs Machinery | | | | | 25 26 | 55 15 | 23 87 | | | | | | 104 28 |
| Repairs General | 10 00 | 48 32 | 110 00 | | | | | 10 20 | | | | | 178 52 |
| Repairs Material | 34 85 | | | | | | | 12 65 | | | | | 47 50 |
| Repairs Wages | 270 83 | 345 00 | 281 16 | | | | | 69 35 | 50 00 | | | | 1,016 34 |
| Rental of Tugs | | | | | | | | | | | | | |
| Contingencies | 5 00 | 7 75 | 7 55 | 81 60 | 13 38 | 34 97 | 9 75 | | | | | | 160 00 |
| Total expenses | 794 09 | 541 22 | 448 58 | 1,094 53 | 1,318 64 | 1,060 33 | 871 95 | 94 80 | 50 00 | | | | 6,274 14 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
| *Ruby* | July 7 | Oct. 15. | Last Mountain Lake | 1,412 08 | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material | Wages. | | | |
| Last Mountain Lake | 2,448 15 | 898 74 | ..... | 1,420 61 | ..... | ..... | 104 28 | 178 52 | 47 50 | 1,016 34 | ..... | 160 00 | 6,274 14 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Last Mountain Lake | July 7 | Oct. 15 | Clay | 9,763. | 870 | 222 | $28·261 | ·642 c. |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Last Mountain Lake | 23 | 2·5 | 221·5 | ..... | ..... | ..... | 228·5 | ..... | 9 | 15 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Last Mountain Lake | 21 | 19·5 | 8 | 78 | 22 | 648 | |

Dredge put into commission at Valeport, Last Mountain Lake, on July 6; laid up for season at Valeport, on October 15.

General Remarks: After Dredge was placed in winter quarters, instructions were received to send the Dredge to Winnipegosis, Man. The Dredge was dismantled and shipped by train under the supervision of the Superintendent of Dredges.

## DREDGE, P W D No. 208, PROVINCE OF SASKATCHEWAN.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | 3,300 | 2,340 | 1,569 | 9,302 | 1,665 | | | | | | 18,266 |
| Class of material | | | Rock & clay | Rock & clay | Hard clay | Hard clay | Hard clay | | | | | | |
| Total possible dredging time ....hrs | | | 170 | 260 | 200 | 260 | 90 | | | | | | 980 |
| Total time lost ....hrs | | | 45 | 201 | 163·5 | 107 | 60 | | | | | | 576·5 |
| Hours actually dredging | | | 125 | 59 | 36·5 | 153 | 30 | | | | | | 403·5 |
| C.yds. handled per hour | | | 26·4 | 39·6 | 43 | 61·3 | 555 | | | | | | |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | | 664 83 | 723 23 | 639 37 | 670 00 | 316 12 | | | | | | 3,013 55 |
| Fuel, Coal and Oil | | | 522 81 | | | | | | | | 800 00 | | 1,322 81 |
| Water | | | | | | | | | | | | | |
| Subsistence | | | 12 00 | 555 80 | 1,039 99 | 277 25 | | 3 50 | | | | | 1,888 54 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores \Machinery | | | | 257 92 | | | 37 00 | | | | | | 294 92 |
| Stores \General | | | 77 49 | | 134 23 | | | | | | | | 211 72 |
| Repairs \Material | | | 39 78 | 5 67 | | | 2 00 | 3 00 | | | | | 50 45 |
| Repairs \Wages | | | | 433 85 | | | | 75 80 | 50 00 | 50 00 | 50 00 | | 225 80 |
| Rental of tugs | | | | | | | | | | | | | 433 85 |
| Contingencies | | | 37 00 | 171 08 | 103 80 | 92 90 | 126 65 | 71 53 | | | | | 602 96 |
| Total Expenses | | | 1,353 91 | 2,147 55 | 1,917 39 | 1,040 15 | 481 77 | 153 83 | 50 00 | 50 00 | 850 00 | | 8,044 60 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
| | | | | $ cts. | | | | | $ cts. |
| *Le Pas* | June 11 | July 7 | Le Pas, Man | 752 45 | SS. *Brisbin* | July 8 | July 15 | Cumberland Lake | 315 00 |
| *Le Pas* | July 8 | Oct. 15 | Cumberland Lake | 1,416 21 | SS. *Minasin* | " 12 | " 15 | " | 78 60 |
| | | | | | SS. *Nolier* | " 13 | " 15 | " | 40 25 |
| | | | | 2,168 66 | | | | | 433 85 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts. | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. |
| Le Pas, Manitoba | 1,045 60 | 458 97 | ..... | 655 25 | ..... | ..... | 102 33 | 73 46 | 17 50 | 78 34 | 150 53 | 209 20 | 2,791 18 |
| Cumberland Lake, Sask | 1,967 95 | 863 84 | ..... | 1,233 29 | ..... | ..... | 192 59 | 138 26 | 32 95 | 147 46 | 283 32 | 393 76 | 5,253 42 |
| Totals | 3,013 55 | 1,322 81 | ..... | 1,888 54 | ..... | ..... | 294 92 | 211 72 | 50 45 | 225 80 | 433 85 | 602 96 | 8,044 60 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Le Pas, Manitoba | June 11 | July 7 | Rock and clay | 3,960 | 220 | 140 | 19·93 | 0·70 |
| Cumberland Lake, Sask | July 21 | Oct. 3 | Hard clay | 14,306 | 760 | 263·5 | 19·93 | 0·367 |
| Totals | | | | 18,266 | 980 | 403·5 | 19·93 | ·44 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Le Pas, Man | 9 | 3 | ..... | ..... | ..... | 10 | 10 | ..... | ..... | 21 | ..... |
| Cumberland Lake, Sask | 29·5 | ..... | 124 | ..... | ..... | ..... | 4 | ..... | 106 | 31 | ..... |
| Totals, hours | 38·5 | 3 | 124 | ..... | ..... | 10 | 14 | ..... | 106 | 52 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Le Pas, Man | ..... | 10 | ..... | ..... | 17 | 80 | |
| Cumberland Lake, Sask | ..... | 27 | ..... | 5 | 170 | 496·5 | |
| Totals, hours | ..... | 37 | ..... | 5 | 187 | 576·5 | |

Dredge put into commission at Le Pas, on June 10; laid up for season at Cumberland Lake, on Oct. 10.
General Remarks: $800 of the total expenditure represents wood purchased during February to be used season of 1915–16.

## DREDGE, P.W.D. No. 209, PROVINCE OF SASKATCHEWAN.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,517 | 2,429 | 3,668 | 1,224 | 1,061 | | | | | | | 9,899 |
| Class of material | | Quick sand | Sand and gravel. | Boulders, clay & sand. | Sand | Sand | | | | | | | |
| Total possible dredging time hrs | | 200 | 260 | 270 | 260 | 220 | | | | | | | 1,210 |
| Total time lost hrs | | 65 | 86 | 45 | 84 | 90 | | | | | | | 370 |
| Hours actually dredging | | 135 | 174 | 225 | 176 | 130 | | | | | | | 840 |
| C.yds. handled per hour | | 11·2 | 13·9 | 16·3 | 6·9 | 8·2 | | | | | | | 12 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | | 169 00 | 187 33 | 198 00 | 194 00 | 180 66 | 128 87 | | | | | | 1,057 86 |
| Fuel, Coal and Oil | | 90 05 | 267 70 | | | | | | | | | | 357 75 |
| Water | | | | | | | | | | | | | |
| Subsistence | | 31 00 | 56 00 | 123 00 | 62 00 | 113 00 | 49 00 | | | | | | 434 00 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores { Machinery | | 9 75 | | 26 23 | | 68 39 | | | | | | | 104 37 |
| Stores { General | | | | | | | | | | | | | |
| Repairs { Material | 138 62 | 90 48 | | | | | 10 10 | | | | | | 239 20 |
| Repairs { Wages | 169 00 | | | | | | | | | | | | 169 00 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | | 4 78 | 2 76 | 19 25 | | 20 00 | 16 61 | | | | | | 63 40 |
| Total Expenses | 307 62 | 395 06 | 513 79 | 366 48 | 256 00 | 382 05 | 204 58 | | | | | | 2,425 58 |

### Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General | Material. | Wages. | | | |
| Fort Qu'Appelle, Qu'Appelle River | $ cts 1,057 86 | $ cts 357 75 | $ cts | $ cts 434 00 | | | $ cts 104 37 | | $ cts 239 20 | $ cts 169 00 | | $ cts 63 40 | $ cts 2,425 58 |
| Totals | 1,057 86 | 357 75 | | 434 00 | | | 104 37 | | 239 20 | 169 00 | | 63 40 | 2,425 58 |

| Expenses Working at | Time Working. From | To | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| Fort Qu'Appelle, Qu'Appelle River | May 8 | Sept. 24 | Sand | 9,899 | 1,210 | 840 | 28·87 | 24·5c. |
| Totals | | | | 9,899 | 1,210 | 840 | 28·87 | 24·5c |

Explanation of Unavoidable Loss of Time.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on Scows, tugs. | Waiting on Orders. | Towing, etc. | Procuring Fuel. | Procuring Water. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fort Qu'Appelle, Qu'Appelle River | 24 | 29 | 83 | | | | | | 113 | 21 | |
| Totals, hours | 24 | 29 | 83 | | | | | | 113 | 21 | |

| Time Lost at | Cleaning. Plant. | Cleaning. Boilers. | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| Fort Qu'Appelle, Qu'Appelle River | 10 | 25 | 10 | 30 | 25 | 370 | |
| Totals, hours | 10 | 25 | 10 | 30 | 25 | 370 | |

General Remarks: Dredge put into Commission at Fort Qu'Appelle on May 8th; dismantled at Qu'Appelle on October 21st. After dredging season closed Sept. 24th the dredge was dismantled and shipped to Renna, Ontario, the dredging having been completed at Qu'Appelle.

BRITISH COLUMBIA

TOTAL COST OF OPERATION, B. C. DREDGING FLEET, FOR 12 MONTHS ENDING MARCH 31, 1915.

| —— | Total Expenditures. | A Wages. | B Fuel. | C Water. | D Subsistence. Provisions and Ice. |
|---|---|---|---|---|---|
| | $ cts | $ cts | $ cts | $ cts | $ cts |
| Dredge *Mastodon*, not including tug service | 125,341 62 | 39,464 83 | 8,662 55 | 33 60 | 9,923 42* |
| Dredge *Fruhling* | 78,492 09 | 25,324 75 | 10,319 59 | 114 04 | 6,240 78* |
| Dredge *King Edward* | 45,372 32 | 20,245 23 | 9,686 69 | 65 50 | 5,216 81* |
| Dredge *Ajax* | 65,614 86 | 23,254 86 | 6,733 47 | 191 75 | 6,514 93* |
| Dredge *Mudlark* | 48,000 04 | 18,864 77 | 5,196 20 | 144 15 | 7,519 89* |
| Dredge *Victoria* | 16,287 94 | 6,124 24 | 1,335 45 | 2 50 | 1,690 39* |
| Drifting Plant | 51,534 36 | 27,567 42 | 4,204 16 | ..... | ..... |
| Diving Plant | 5,436 35 | 5,005 00 | 83 53 | ..... | ..... |
| Lobnitz Rock Breaker No. 1 | 40,351 63 | 14,241 94 | 4,301 80 | 52 50 | 3,388 81 |
| Lobnitz Rock Breaker No. 2 | 24,242 08 | 8,750 34 | 2,607 38 | 110 00 | 2,843 80* |
| Tug *Point Ellice* | 22,735 07 | 11,743 42 | 4,772 66 | 8 40 | 3,453 23* |
| Tug *Point Grey* | 26,828 42 | 11,832 08 | 4,695 93 | ..... | 3,485 03* |
| Tug *Petrel* | 16,351 29 | 7,305 33 | 1,803 07 | 6 60 | 1,716 88* |
| Tug *Point Hope* | 13,601 94 | 8,767 98 | 2,890 45 | 28 80 | ..... |
| Tug *Point Garry* | 4,863 93 | 2,450 29 | 1,053 65 | ..... | 2 60* |
| Superintendent's Launch | 3,483 28 | 1,774 72 | 411 51 | ..... | 359 02* |
| Dredging, B. C | 10,716 62 | 6,985 06 | ..... | ..... | ..... |
| Totals | 599,253 84 | 239,702 26 | 68,758 09 | 757 84 | 52,355 59* |

* Includes Fuel, Laundry and G. and D. R. Equipment.

TOTAL COST OF OPERATION, B. C. DREDGING FLEET, FOR 12 MONTHS ENDING MARCH 31, 1915—*Concld*

| | E | F | G Stores. | | H Repairs. | | J | K |
|---|---|---|---|---|---|---|---|---|
| | Wharfage. | Pilotage. | Machinery. | General. | Material. | Wages. | Rental of Tugs. | Contingencies |
| | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts. |
| Dredge *Mastodon* | 935 00 | | 12,467 69 | 2,853 50 | 48,798 31 | | | 2,202 72 |
| Dredge *Fruhling* | | | 4,278 35 | 857 64 | 31,060 27 | 14 25 | 100 00 | 182 42 |
| Dredge *King Edward* | | | 5,052 14 | 528 97 | 2,982 26 | | 155 60 | 1,439 72 |
| Dredge *Ajax* | | | 10,951 92 | 857 81 | 16,697 81 | | | 412 31 |
| Dredge *Mudlark* | 60 00 | | 2,442 40 | 705 67 | 11,934 01 | 810 95 | | 292 00 |
| Dredge *Victoria* | | | 1,443 34 | 147 81 | 5,095 22 | | 35 00 | 413 99 |
| Drilling Plant | | | 4,119 20 | 668 29 | 4,109 13 | | 62 00 | 10,804 16 |
| Diving Plant | | | 43 70 | 57 54 | 26 44 | | | 220 14 |
| Lobnitz Rock Breaker No. 1 | | | 7,953 09 | 515 74 | 9,696 91 | 12 00 | | 188 84 |
| Lobnitz Rock Breaker No. 2 | | | 4,563 22 | 360 61 | 4,831 38 | | 17 00 | 158 35 |
| Tug *Point Ellice* | | | 1,402 38 | 258 71 | 1,074 27 | | | 22 00 |
| Tug *Point Grey* | | | 1,822 04 | 349 65 | 4,521 79 | | | 121 90 |
| Tug *Petrel* | | | 1,253 26 | 326 36 | 2,899 94 | 949 45 | | 90 40 |
| Tug *Point Hope* | | | 580 10 | 196 18 | 1,118 63 | | | 19 80 |
| Tug *Point Garry* | | | 143 83 | 16 12 | 1,181 44 | | 5 00 | 11 00 |
| Superintendent's Launch | | | 383 59 | 111 66 | 204 90 | | | 237 88 |
| Dredging, B. C. | | | | | | | | 3,731 56 |
| Totals | 995 00 | | 58,900 25 | 8,812 26 | 146,232 71 | 1,816 65 | 374 00 | 20,549 19 |

DREDGE, P. W. D. No. 306 ("MASTODON"), PROVINCE OF BRITISH COLUMBIA.

DETAILS OF TIME AND MATERIAL BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 58,240 | 124,280 | 107,900 | 107,120 | 37,960 | 56,160 | 103,740 | 110,240 | 70,200 | 61,100 | 85,540 | 922,480 |
| Class of material | | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. | Gravel. |
| Total possible dredging time | 229 | 329·5 | 460 | 480 | 454·5 | 360·25 | 370·5 | 440 | 485 | 440 | 346·5 | 396 | 4,791·25 |
| Total time lost | 229 | 190·75 | 164 | 218·5 | 195·75 | 266·75 | 201·25 | 122·75 | 152·75 | 215·5 | 164·25 | 143·75 | 2,265 |
| Hours actually dredging | | 138·75 | 296 | 261·5 | 258·75 | 93·5 | 169·25 | 317·25 | 332·25 | 224·5 | 182·25 | 252·25 | 2,526 25 |
| C.yds. handled per hour | | 419·8 | 419·8 | 408·1 | 414 | 406 | 331·8 | 327 | 331·8 | 312·7 | 334·6 | 339·1 | |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 4,137 33 | 4,224 70 | 4,342 28 | 4,177 02 | 4,179 60 | 4,426 48 | 4,185 03 | 4,201 75 | 4,333 14 | 4,222 74 | 4,204 64 | 4,662 20 | 51,296 91 |
| Fuel, coal, and oil | 258 66 | 1,485 45 | 838 16 | 819 90 | 1,247 52 | 1,531 83 | 1,185 56 | 1,188 21 | 138 31 | 2,578 92 | 704 71 | 1,381 25 | 13,358 48 |
| Water | | | | | | | | | | | | 33 60 | 33 60 |
| Subsistence | 1,082 41 | 1,197 28 | 1,032 64 | 1,162 85 | 918 00 | 1,045 27 | 876 03 | 1,331 04 | 1,348 54 | 1,073 75 | 1,135 51 | 1,205 13 | 13,408 45 |
| Wharfage | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 75 00 | 110 00 | 75 00 | 935 00 |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 1,168 13 | 500 06 | 520 37 | 1,177 62 | 636 46 | 1,095 35 | 807 58 | 1,270 14 | 5,389 55 | 365 24 | 656 34 | 702 89 | 14,289 73 |
| Stores (General | 259 00 | 1,143 76 | 126 46 | 143 46 | 157 09 | 454 17 | 99 18 | 245 03 | 49 60 | 77 60 | 296 84 | 150 96 | 3,203 15 |
| Repairs (Material | 6,859 50 | 2,328 01 | 404 36 | 7,764 21 | 3,448 85 | 979 30 | 8,590 61 | 4,592 29 | 1,945 75 | 3,865 05 | 2,233 11 | 10,309 06 | 53,320 10 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 172 82 | 672 90 | 31 80 | 9 25 | 471 60 | 85 10 | 152 85 | 34 25 | | | 5 00 | 653 55<br>35 50 | 2,324 62 |
| Total expenses | 14,012 85 | 11,627 16 | 7,371 07 | 15,329 31 | 11,134 12 | 9,692 50 | 15,971 84 | 12,937 71 | 13,279 89 | 12,258 30 | 9,346 15 | 19,209 64 | 152,170 04 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| *Point Grey* | April 1... | Mar. 31.. | Vancouver, B C. | $26,828 42 | | | | | |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| First Narrows, Vancouver | 51,296 91 | 13,358 48 | 33 60 | 13,408 45 | 935 00 | ..... | 14,289 73 | 3,203 15 | 53,320 10 | ..... | ..... | 2,324 62 | 152,170 04 |
| Totals | 51,296 91 | 13,358 48 | 33 60 | 13,408 45 | 935 00 | ..... | 14,289 73 | 3,203 15 | 53,320 10 | ..... | ..... | 2,324 62 | 152,170 04 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| First Narrows, Vancouver | April 1, 1914. | Mar. 31, 1915. | Gravel | 922,480 | 4,791·25 | 2,526·25 | $60 24 | 16·49 c. |
| Totals | ..... | ..... | ..... | 922,480 | 4,791·25 | 2,526·25 | $60 24 | 16·49 c. |

## Explanation of Unavoidable Loss of Time.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Wallace Shipyards | 277 | ..... | ..... | ..... | ..... | 19 | ..... | ..... | ..... | ..... | ..... |
| First Narrows, Vancouver | 84·25 | 97·25 | 58·25 | 12·25 | 41·75 | 80 | 80·50 | ..... | 14 | 5·5 | 0·5 |
| Wallace Shipyards | 239·5 | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| First Narrows, Vancouver | 95·5 | 54·75 | 34 | 46·5 | 42·5 | 82 | 167·25 | ..... | 25 | 4·75 | ..... |
| Totals, hours | 696·25 | 154 | 92·25 | 58·75 | 84·25 | 181 | 247·75 | ..... | 39 | 10·25 | 0·5 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Wallace Shipyards | ..... | ..... | ..... | ..... | ..... | 296 | April 1, to May 16, 1914. |
| First Narrows, Vancouver | 11·25 | 19 | 21 | ..... | 278·25 | 803·75 | May 18, 1914, to Sept 12, 1914 |
| Wallace Shipyards | ..... | ..... | ..... | ..... | ..... | 241·5 | Sept. 12, 1914 to October 11, 1914 |
| First Narrows, Vancouver | 45·75 | 6 | 71·5 | ..... | 248·25 | 923·75 | October 12 to March 31, 1915 |
| Totals, hours | 57 | 25 | 92·5 | ..... | 526·5 | 2,265 | |

General Remarks: April to May 16, 1914, dismantling top tumbler, and general overhaul of Dredge. September 12 to October 11, 1914, repairs to ladder and chains and replacing buckets. Bucket chain broke, September 14, 1914.

## DREDGE, P.W.D. No. 303 ("FRUHLING") PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

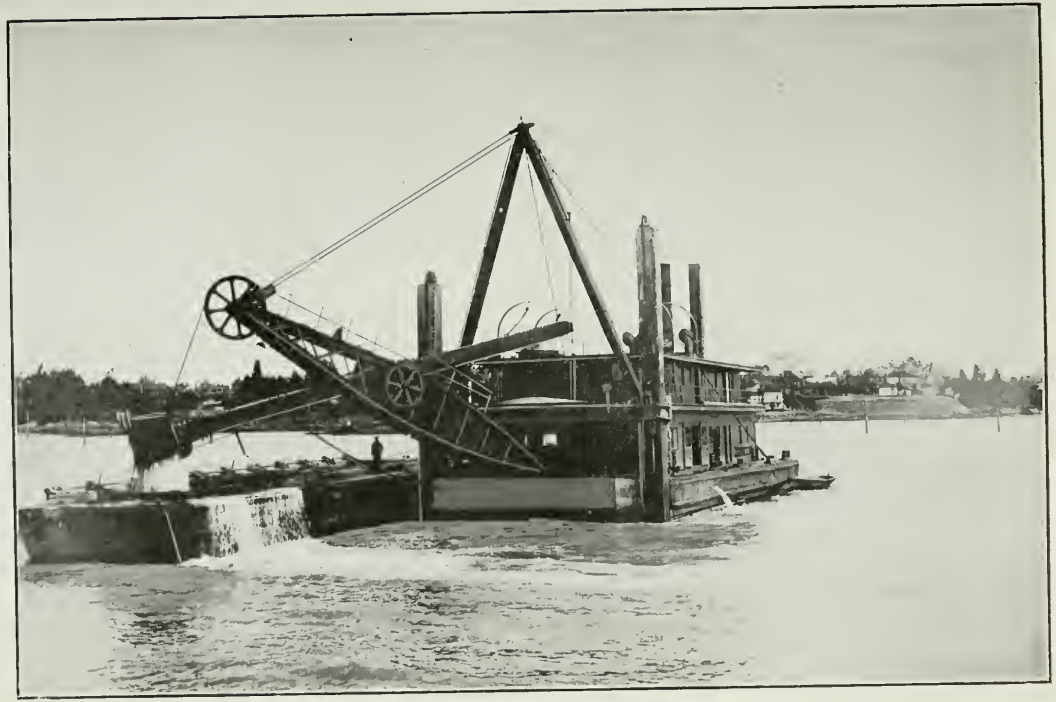
| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 103,000 | 146,950 | 146,600 | 167,450 | 99,695 | ..... | ..... | ..... | 94,475 | 88,480 | ..... | ..... | 816,650 |
| Class of material | Mud & clay. | Sand & clay | Sand & clay | Sand & clay | Sand & clay | ..... | ..... | ..... | Sand & clay | Sand & clay | ..... | ..... | ..... |
| Total possible dredging time ..... hrs | 460 | 445·5 | 459·75 | 480 | 434·5 | 219·5 | 234 | 219·5 | 444· | 445· | 210 | 238·5 | 4,290·25 |
| Total time lost ..... hrs | 279·25 | 282·5 | 243·5 | 210·25 | 307·5 | 219·5 | 234 | 219·5 | 296·25 | 307·75 | 210 | 238·5 | 3,048·5 |
| Hours actually dredging | 180·75 | 163· | 216·25 | 269·75 | 127· | ..... | ..... | ..... | 147·75 | 137·25 | ..... | ..... | 1,241·75 |
| C.yds. handled per hour | 551· | 717·4 | 677·8 | 620·7 | 780· | ..... | ..... | ..... | 639·4 | 644·7 | ..... | ..... | ..... |

### Details of Expenditure by Months.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 2,134 25 | 2,064 17 | 2,134 08 | 2,184 36 | 1,996 83 | 2,101 82 | 2,220 44 | 2,086 82 | 2,095 29 | 2,119 93 | 2,122 21 | 2,064 55 | 25,324 75 |
| Fuel, Coal and Oil | 1,697 85 | 1,549 90 | 1,392 05 | 1,542 75 | 1,218 25 | 212,82 | ..... | 168 90 | 275 91 | 1,855 59 | 202 51 | 203 06 | 10 310 59 |
| Water | 16 63 | ..... | 23 30 | ..... | 19 19 | ..... | 12 19 | ..... | 14 63 | 5 40 | 17 10 | 5 60 | 114 04 |
| Subsistence | 478 18 | 657 26 | 578 83 | 493 17 | 567 12 | 517 27 | 422 65 | 463 43 | 521 72 | 574 54 | 460 87 | 505 74 | 6,240 78 |
| Wharfage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pilotage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stores/Machinery | 117 10 | 416 15 | 86 95 | 666 59 | 509 25 | 156 52 | 492 30 | 549 29 | 271 29 | 204 98 | 447 05 | 360 88 | 4,278 35 |
| \General | 35 00 | 42 86 | 9 45 | 29 49 | 5 80 | 127 70 | 146 43 | 202 69 | 6 45 | 156 74 | 75 78 | 19 25 | 857 64 |
| Repairs/Material | 208 85 | 179 67 | 1,279 75 | 1,694 13 | 127 91 | 265 77 | 5,436 60 | 8,452 56 | 1,504 77 | 3,446 75 | 1,087 77 | 7,375 74 | 31,060 27 |
| \Wages | ..... | ..... | ..... | ..... | ..... | 14 25 | ..... | ..... | ..... | ..... | ..... | ..... | 14 25 |
| Rental of tugs | ..... | ..... | ..... | ..... | 100 00 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 100 00 |
| Contingencies | 23 20 | 17 60 | 7 05 | 35 85 | 15 88 | 6 35 | 19 26 | ..... | 29 54 | 5 60 | 15 19 | 7 50 | 182 42 |
| Total Expenses | 4,711 06 | 4,927 61 | 5,511 46 | 6,646 34 | 4,560 23 | 3,402 50 | 8,749 87 | 11,923 69 | 4,719 60 | 8,368 93 | 4,428 48 | 10,542 32 | 78,492 09 |

### Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| New Westminster, B.C. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. |
| Sand Heads, etc | 15,526 60 | 6,326 94 | 69 92 | 3,826 22 | ..... | ..... | 2,623 06 | 525 82 | 19,043 05 | 8 74 | 61 31 | 111 84 | 48,123 30 |
| Annacis Bar | 2,066 50 | 842 08 | 9 31 | 509 24 | ..... | ..... | 349 11 | 69 99 | 2,534 52 | 1 16 | 8 16 | 14 89 | 6,404 96 |
| Annacis Bar | 1,332 08 | 542 81 | 6 00 | 328 26 | ..... | ..... | 225 04 | 45 11 | 1,633 77 | 0 75 | 5 26 | 9 66 | 4,128 68 |
| Sand Heads | 6,399 57 | 2,607 76 | 28 81 | 1,577 06 | ..... | ..... | 1,081 14 | 216 72 | 7,848 93 | 3 60 | 25 27 | 46 09 | 19,834 95 |
| Totals | 25,324 75 | 10,319 59 | 114 04 | 6,240 78 | ..... | ..... | 4,278 35 | 857 64 | 31,060 27 | 14 25 | 100 00 | 182 42 | 78,492 09 |



Dredge "Ajax", No. 301, British Columbia.

| Expenses Working at | Time Working | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| New Westminster, B.C. | From | To | | | | | | |
| Sand Heads, etc | April 1 | Dec. 23 | Sand and clay | 559,905 | 2,630·75 | 871· | $55·25 | 8·59c. |
| Annacis Bar | Aug. 6 | Aug. 28 | Sand and clay | 73,790 | 350·5 | 85·75 | 74·69 | 8·68 |
| Annacis Bar | Dec. 4 | Dec. 18 | Sand and clay | 37,565 | 224·5 | 57·75 | 71·49 | 10·99 |
| Sand Heads | Dec. 21 | Mar. 31-15 | Sand and clay | 145,390 | 1,084·5 | 227·25 | 87·28 | 13·64 |
| Totals | | | | 816,650 | 4,290·25 | 1,241·75 | $63·21 | 9·61 |

Explanation of Unavoidable Loss of Time.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on Obstruction in pipes. | | Discharging, etc. | Procuring Fuel. | Procuring Water. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sand Heads | 273·25 | 96 | 123·75 | 2· | 38·25 | 100· | | | 346·75 | 25·25 | |
| Annacis Bar, Westminster | 24·5 | | | 12·5 | | | 49·75 | | 160·25 | 8· | |
| Vulcan Iron Works, etc | 711· | | | | | | | | | | |
| Annacis Bar | 23· | | | 10·5 | | | 33·75 | | 78·5 | | |
| Sand Heads | 22·75 | 26 | 64·75 | 25·25 | 2· | 50·5 | | | 91·25 | 6·5 | |
| Vulcan Iron Works, etc | 531· | | | | | | | | | | |
| Totals, hours | 1,585·5 | 122· | 188·5 | 50·25 | 40·25 | 150·5 | 83·5 | | 676·75 | 39·75 | |

| Time Lost at | Cleaning. Plant. | Cleaning. Boilers. | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| Sand Heads | | | | | 43·5 | 1,048·75 | April 1 to August 5, 1914. |
| Annacis Bar, Westminster | | | | | 9·75 | 264·75 | August 6 to August 28, 1914. |
| Vulcan Iron Works, etc | | | | | | 711· | August 31 to December 3, 1914 |
| Annacis Bar | | | | | 21· | 166·75 | December 4 to December 18, 1914. |
| Sand Heads | | 5 | | | 32·25 | 326·25 | December 21, to January 26, 1915. |
| Vulcan Iron Works, etc | | | | | | 531· | From January 26 to March 31, 1915. |
| Totals, hours | | 5 | | | 106·5 | 3,048·5 | End of fiscal year. |

General Remarks: Dredge under repairs at Vulcan Iron Works, August 31 to October 21 (386·5 hours); at B.C. Marine, October 22 to November 10 (210 hours); at Heaps Engineering, November 11 to December 3 (114·5 hours). Work done:—Installing new suction arm; boilers under repairs; and general overhaul.

Dredge under repairs:—Installing new pumps; extra oil tanks; and new mess and galley—From January 26th to end of fiscal year.

DREDGE, P.W.D. No. 305 ("KING EDWARD") PROVINCE OF BRITISH COLUMBIA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 62,250 | 24,625 | 49,444 | 87,280 | 29,060 | 78,365 | 25,850 | 45,790 | 28,410 | 38,495 | 28,205 | 28,725 | 526,499 |
| Class of material | Silt & clay.. | Silt & clay.. | Silt & clay.. | Silt & clay.. | Sand & boulders. | Sand & gravel. | Sand & gravel. | Silt & snags | Sand & gravel. | Gravel..... | Coarse gravel | Sand & silt | ..... |
| Total possible dredging time ..... hrs | 251·5 | 236·5 | 258· | 285· | 244· | 269· | 238·75 | 219·5 | 350·5 | 388· | 420· | 488· | 3,617·75 |
| Total time lost ..... hrs | 132·75 | 191·5 | 163·75 | 145·5 | 170·75 | 131·5 | 166·25 | 85· | 195·25 | 194·25 | 192·75 | 259·25 | 1,928·50 |
| Hours actually dredging | 118·75 | 45· | 94·25 | 139·5 | 73·25 | 197·5 | 72·5 | 134·5 | 164·25 | 193·75 | 227·25 | 228·75 | 1,689·25 |
| C.yds. handled per hour | 524· | 547· | 524· | 625· | 396· | 396· | 356· | 340· | 179· | 198· | 124· | 125· | ..... |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages ..... | 1,717 50 | 1,566 45 | 1,688 75 | 1,816 75 | 1,675 93 | 1,743 87 | 1,633 59 | 1,586 00 | 2,338 23 | 2,315 31 | 2,292 50 | 2,320 64 | 22,695 52 |
| Fuel, Coal and Oil..... | 1,138 10 | 468 14 | 449 20 | 1,056 45 | 1,330 37 | 875 43 | 55 65 | 941 54 | 669 43 | 2,186 36 | 805 45 | 770 22 | 10,740 34 |
| Water ..... | 9 50 | ..... | 9 25 | 9 75 | 1 06 | 36 00 | ..... | ..... | ..... | ..... | ..... | ..... | 65 50 |
| Subsistence ..... | 490 51 | 396 03 | 389 54 | 289 68 | 541 78 | 515 29 | 411 39 | 504 93 | ..... | 583 41 | 460 59 | 612 24 | 5,219 41 |
| Stores {Machinery.... | 748 63 | 129 54 | 210 66 | 226 94 | 414 97 | 185 49 | 480 21 | 127 22 | 361 06 | 423 66 | 883 12 | 1,011 08 | 5,195 97 |
| {General..... | 44 25 | 49 30 | 19 03 | 1 00 | 74 15 | ..... | 5 16 | 70 25 | 44 67 | 27 94 | 198 05 | 11 35 | 545 09 |
| Repairs {Material..... | 749 27 | 152 93 | 43 74 | 206 02 | 627 21 | 163 52 | 28 01 | 330 97 | 383 77 | 262 67 | 467 63 | 933 96 | 4,163 76 |
| {Wages ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Rental of tugs ..... | ..... | ..... | ..... | ..... | 5 06 | ..... | ..... | ..... | 100 00 | 55 00 | ..... | ..... | 160 06 |
| Contingencies..... | 11 75 | 29 28 | 10 55 | 8 35 | 12 54 | 242 75 | 788 50 | 25 81 | 50 60 | 23 09 | 160 90 | 86 60 | 1,450 72 |
| Total Expenses .. | 4,909 53 | 2,785 67 | 2,820 72 | 3,602 93 | 4,682 95 | 3,732 35 | 3,402 45 | 3,586 72 | 3,947 76 | 5,810 84 | 5,208 24 | 5,746 09 | 50,236 25 |

DETAILS OF TUG SERVICE—Tugs in attendance, and included in these operations.

DEPARTMENT TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts. |
| *Point Garry* ..... | April 1.. | May 30.. | Sand Heads ..... | 655 06 |
| " ..... | June 1.. | June 6.. | Eburne, Lulu Is ..... | 70 53 |
| " ..... | June 8.. | Aug. 4.. | Sand Heads ..... | 697 40 |
| " ..... | Aug. 10.. | Nov. 2.. | Comox, Courtenay River..... | 920 27 |
| " ..... | Nov. 4.. | Dec. 17.. | McDonald's Bar ..... | 797 68 |
| " ..... | Jan. 4.. | Jan. 16.. | Heaps Eng. Works..... | 219 84 |
| " ..... | Jan. 18.. | Mar. 26.. | McDonald's Bar ..... | 1,424 64 |
| " ..... | Mar. 26.. | Mar. 31.. | River Side Wharf. ..... | 77 82 |
| Total ..... | | | | 4,863 03 |

RENTED TUGS.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. |
|---|---|---|---|---|
| | | | | $ cts |
| *SS. Stronger*..... | Aug. 10 | | Comox-Courtenay river..... | 5 00 |
| " " ..... | Jan. 4 | 8th. | Heaps Engr Works ..... | 100 00 |
| City Wharf Co., Ltd., tug... | Jan. 29 | | McDonald's Bar..... | 55 00 |

## Details of Expenses and Results Obtained at Points of Work.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Sand Heads | 3,059 36 | 1,447 80 | 8 83 | 703 58 | ..... | ..... | 700 41 | 73 48 | 561 26 | ..... | 21 57 | 195 56 | 6,771 85 |
| Eburne, Lulu Island | 329 09 | 155 73 | 0 95 | 75 68 | ..... | ..... | 75 35 | 7 90 | 60 37 | ..... | 2 32 | 21 03 | 728 42 |
| Sand Hearis | 3,254 54 | 1,540 17 | 9 39 | 748 46 | ..... | ..... | 745 10 | 78 17 | 597 08 | ..... | 22 94 | 208 03 | 7,203 88 |
| Comox, Courtenay River | 4,294 00 | 2,032 07 | 12 39 | 987 51 | ..... | ..... | 983 08 | 103 13 | 787 77 | ..... | 30 27 | 274 48 | 9,504 70 |
| McDonald's Bar | 3,722 06 | 1,761 41 | 10 74 | 855 98 | ..... | ..... | 852 14 | 89 40 | 682 85 | ..... | 26 24 | 237 92 | 8,238 74 |
| Heaps Eng. Works | 1,025 84 | 485 46 | 2 96 | 235 92 | ..... | ..... | 234 86 | 24 64 | 188 20 | ..... | 7 23 | 65 57 | 2,270 68 |
| McDonald's Bar | 6,647 52 | 3,145 84 | 19 18 | 1,528 76 | ..... | ..... | 1,521 90 | 159 65 | 1,219 55 | ..... | 46 86 | 424 94 | 14,714 20 |
| River Side Wharf | 363 11 | 171 86 | 1 06 | 83 52 | ..... | ..... | 83 13 | 8 72 | 66 62 | ..... | 2 57 | 23 19 | 803 78 |
| Totals | 22,695 52 | 10,740 34 | 65 50 | 5,219 41 | ..... | ..... | 5,195 97 | 545 09 | 4,163 70 | ..... | 160 00 | 1,450 72 | 50,236 25 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| | | | | | | | $ cts | Cents. |
| Sand Heads | April 1 | May 30 | Sand and silt | 86,875 | 488 | 163·75 | 41 35 | 7·79 |
| Eburne, Lulu Island | June 1 | June 6 | " | 5,335 | 52·5 | 10·75 | 67 76 | 13·65 |
| Sand Heads | June 8 | Aug. 4 | " | 135 764 | 517·5 | 230·75 | 31 21 | 5·30 |
| Comox, Courtenay River | Aug. 10 | Nov. 2 | " | 128,900 | 684·75 | 335·5 | 28 33 | 7·37 |
| McDonald's Bar | Nov. 4 | Dec. 17 | Silt and snags | 74,200 | 593·5 | 298·75 | 27 58 | 11 10 |
| Heaps Eng. Works | Jan. 4 | Jan. 16 | Gravel, silt and sand | 17,535 | 103·5 | 43·25 | 52 50 | 12·94 |
| McDonald's Bar | Jan. 18 | Mar. 26 | Gravel | 68,710 | 1,060 | 588·75 | 24 99 | 21·41 |
| River Side Wharf | Mar. 29 | Mar. 30 | Sand and silt | 9,180 | 58 | 17·75 | 45 28 | 8·75 |
| Totals | | | | 526,499 | 3,617·75 | 1,689·25 | 29 73 | 9·54 |

General Remarks: May 18 to May 30, 1914.—Installing larger Oil Tanks. Sailed for Comox August 10, 1914; arrived at Comox August 14, 1914; finished cut at Comox Oct. 12, 1914; arrived back at New Westminster Oct. 21, 1914. Oct. 22, 1914 to Nov. 2, 1914.—Overhauling Plant, Cleaning Boilers, etc. Dec. 18 to Jan. 2, 1915.—Runners and Cutter Shaft replaced. General Overhaul of Dredge.—Feb. 22, 1915 to March 10, 1915. Night Shift commenced December 1, 1914.

## Explanation of Unavoidable loss of Time.

| Time Lost. | Repairs | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, &c. | Procuring. | | Cleaning. | | Inspecting Boilers. | Short Supplies | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, Tugs. | Orders. | | Fuel. | Water. | Plant. | Boilers. | | | | | |
| Totals, Hours | 429·25 | 240·75 | 180·75 | – | 131·25 | 90·5 | 2·5 | 21·5 | 426·5 | 44·25 | 1·00 | 10·75 | 72·5 | 19· | 22· | 236· | 1,928·5 | |

## DREDGE, P. W. D. No. 301 ("AJAX"), PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 11,110 | 33,245 | 32,090 | 31,835 | 16,560 | 27,775 | 30,159 | 47,160 | 19,420 | 13,810 | 34,480 | 11,310 | 308,954 |
| Class of material | Clay, hard pan. | Clay, hard-pan. | Mud, silt, sand. | Rock, hard-pan. | Silt, mud | Rock, mud, hardpan. | Rock, clay. | Hard sand, mud. | Rock, clay. | Rock, Clay | Rock, clay. | Rock, hard-pan. | |
| Total possible dredging time | 292 | 434·5 | 456 | 480 | 340 | 418 | 465 | 438 | 474·5 | 450 | 413·5 | 374 | 5,035·5 |
| Total time lost | 220 | 151·25 | 243·75 | 192·25 | 177·5 | 168·75 | 141·75 | 205·5 | 200·75 | 217·25 | 134·75 | 213·25 | 2,266·75 |
| Hours actually dredging | 72 | 283·25 | 212·25 | 287·75 | 162·5 | 249·25 | 323·25 | 232·5 | 273·75 | 232·75 | 278·75 | 160·75 | 2,768·75 |
| C.yds. handled per hour | 154·3 | 117·3 | 141·1 | 110·6 | 101·9 | 111·4 | 93·2 | 202·4 | 71·2 | 55 | 123·7 | 70·3 | ..... |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 2,875 41 | 2,883 91 | 2,893 19 | 2,921 53 | 2,864 27 | 2,887 15 | 2,969 41 | 2,963 33 | 2,921 99 | 2,889 88 | 2,872 52 | 3,055 69 | 34,998 28 |
| Fuel, coal, and oil | 577 25 | 1,244 45 | 929 80 | 1,148 75 | 917 30 | 718 75 | 1,271 10 | 1,203 07 | 1,265 59 | 960 27 | 1,027 60 | 242 20 | 11,506 13 |
| Water | 18 00 | 15 25 | 14 45 | 15 25 | 22 20 | 18 70 | 22 90 | 18 10 | 19 80 | ..... | 18 10 | 17 40 | 200 15 |
| Subsistence | 755 25 | 916 21 | 1,023 90 | 956 97 | 937 84 | 828 47 | 522 68 | 955 34 | 783 07 | 695 25 | 717 98 | 875 20 | 9,968 16 |
| Wharfage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pilotage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stores / Machinery | 1,441 90 | 1,754 66 | 1,066 26 | 339 31 | 463 83 | 576 54 | 1,233 47 | 1,299 86 | 336 70 | 2,214 83 | 227 42 | 1,399 52 | 12,354 30 |
| Stores / General | 132 06 | 66 93 | 249 95 | 44 25 | 223 23 | 31 65 | ..... | 49 51 | 48 62 | 53 18 | 144 93 | 72 21 | 1,116 52 |
| Repairs / Material | 219 47 | 500 54 | 1,188 14 | 1,827 14 | 1,539 75 | 2,041 42 | 707 78 | 1,260 80 | 1,138 94 | 657 33 | 2,951 34 | 3,739 43 | 17,772 08 |
| Repairs / Wages | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Rental of tugs | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Contingencies | 241 48 | 16 53 | ..... | 11 90 | 7 50 | 12 60 | 75 40 | 9 30 | 30 75 | 7 60 | 1 00 | 20 25 | 434 31 |
| Total expenses | 6,260 82 | 7,398 48 | 7,365 69 | 7,265 10 | 6,975 92 | 7,115 28 | 6,802 74 | 7,759 31 | 6,545 46 | 7,478 34 | 7,960 89 | 9,421 90 | 88,349 93 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. | Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. |
| *Point Ellice* | April 1-14 | June 1 | Victoria Harbour | $ cts. 3,373 31 | | | | | $ cts. |
| " | June 4 | " 8 | William's Head | 470 41 | | | | | |
| " | " 9 | " 15 | Royal Bay | 474 95 | | | | | |
| " | " 16 | " 24 | Victoria Harbour | 756 74 | | | | | |
| " | " 24 | July 10 | Royal Bay | 1,038 54 | | | | | |
| " | July 13 | Mar. 31-15 | Victoria Harbour | 16,621 12 | | | | | |
| | | | Total | $22,735 07 | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Victoria Harbour | 5,179 74 | 1,702 91 | 29 62 | 1,475 29 | | | 1,828 44 | 165 24 | 2,630 27 | | | 72 80 | 13,084 31 |
| Williams Head | 724 47 | 238 18 | 4 14 | 206 34 | | | 255 74 | 23 11 | 367 88 | | | 8 78 | 1,828 64 |
| Royal Bay | 731 46 | 240 48 | 4 18 | 208 33 | | | 258 21 | 23 34 | 371 44 | | | 8 87 | 1,846 31 |
| Victoria Harbour | 1,165 45 | 383 15 | 6 66 | 331 04 | | | 411 40 | 37 18 | 591 81 | | | 14 13 | 2,941 72 |
| Royal Bay | 1,599 42 | 525 83 | 9 15 | 455 54 | | | 564 59 | 51 02 | 812 18 | | | 19 40 | 4,037 13 |
| Victoria Harbour | 25,597 74 | 8,415 58 | 146 40 | 7,290 72 | | | 9,035 92 | 816 63 | 12,998 50 | | | 310 33 | 64,611 82 |
| Totals | 34,998 28 | 11,506 13 | 200 15 | 9,968 16 | | | 12,354 30 | 1,116 52 | 17,772 08 | | | 434 31 | 88,349 93 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | Cents. |
| Victoria Harbour | April 1 | June 1 | Clay, hardpan | 44,835 | 745·5 | 358·75 | $36 47 | 29·18 |
| Williams Head | June 4 | June 8 | Silt and mud | 4,020 | 104 | 36 | 50·79 | 37·16 |
| Royal Bay | " 9 | " 15 | Mud, silt, sand | 7,390 | 105 | 59 | 31 29 | 24·98 |
| Victoria Harbour | " 16 | " 24 | Mud, silt, sand | 9,600 | 167·75 | 70·5 | 41 72 | 30·64 |
| Royal Bay | " 24 | July 10 | Mud, silt, sand | 31,370 | 230·25 | 128·25 | 31·48 | 12·86 |
| Victoria Harbour | July 13 | Mar. 31 | Rock, hardpan | 210,839 | 3,683·00 | 2,116·25 | 30 53 | 30·64 |
| Totals | | | | 308,954 | 5,035·5 | 2,768·75 | 21 90 | 28·59 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs | Orders. | | Fuel. | Water. |
| Victoria Harbour | 264·75 | 4·5 | | | | 49·5 | 5·25 | | 10·5 | 6·75 | |
| Williams Head | 5·0 | 0·75 | 5·5 | | 3·5 | 20·0 | | | 28·0 | | |
| Royal Bay | 2·5 | 0·5 | 5·5 | | | | 2·5 | 3·0 | 15·5 | 10·5 | |
| Victoria Harbour | 50·5 | 2·25 | 18·25 | | | | 16·25 | | 1·75 | | |
| Royal Bay | 4·25 | 4·0 | 23·0 | | 5·0 | 20·0 | 19·5 | 3·0 | 9·5 | | |
| Victoria Harbour | 714·75 | 35·25 | 165·75 | 9·5 | 25·25 | 90·5 | 96·5 | | 53·75 | 28·5 | 2·0 |
| Totals, hours | 1,041 75 | 47·25 | 218·0 | 9·5 | 33·75 | 180·0 | 140·0 | 6·0 | 119·0 | 45·75 | 2·0 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Victoria Harbour | | | | | 45·5 | 386·75 | April 1 to June 1, 1914. |
| Williams Head | | | | | 5·25 | 68 | June 4 to June 8, 1914. |
| Royal Bay | | | | | 6 | 46 | June 9 to June 15, 1914. |
| Victoria Harbour | | | | | 8·25 | 97·25 | June 16 to June 24, 1914. |
| Royal Bay | | | | | 13·75 | 102 | June 24 to 27 and July 2 to 10, 1914 |
| Victoria Harbour | 7·25 | 39·5 | | | 208·25 | 1,566·75 | July 13 to March 31, 1915. End of fiscal year. |
| Totals, hours | 7·25 | 39·5 | | | 377 | 2,266·75 | |

General Remarks: Annual Overhaul and new port spud, August 19, 1914, to September 4, 1914. Dredge on V.M.D. ways from March 1, 1915 to March 16, 1915, for cleaning, painting, and repairing back brace on dipper and renewing teeth, etc.

## DREDGE, P.W.D. No. 307 ("MUDLARK") PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 17,650 | 16,400 | 19,150 | 9,450 | 6,850 | 19,950 | 21,100 | 16,600 | 15,750 | 21,350 | 14,350 | 24,650 | 203,250 |
| Class of material | Mud & clay | Hardpan and clay. | Hardpan and clay. | Grey clay. | Mud, clay hardpan. | Mud, clay, hardpan. | Mud, clay, hardpan. | Mud & silt | Mud & clay. | Mud & clay. | Mud & clay. | Mud & clay. | |
| Total possible dredging time hrs | 465 | 392·5 | 460· | 359· | 337· | 460· | 465· | 137· | 467· | 444·5 | 325·5 | 448·5 | 5,061· |
| Total time lost. hrs | 219 | 139·5 | 196·5 | 223· | 235·5 | 172· | 156· | 217·5 | 281·5 | 179· | 163·5 | 142·5 | 2,325·5 |
| Hours actually dredging | 246 | 253· | 263·5 | 136· | 101·5 | 288· | 309· | 219·5 | 185·5 | 265·5 | 162· | 306· | 2,735·5 |
| C.yds. handled per hour | 71·7 | 64·8 | 72·6 | 69·9 | 67·4 | 68·5 | 68·2 | 75·6 | 84·9 | 80·5 | 88·5 | 80·5 | |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 2,385 97 | 2,468 31 | 2,316 83 | 1,504 71 | 2,375 58 | 2,346 74 | 2,396 46 | 2,579 87 | 2,108 86 | 2,431 29 | 2,333 72 | 2,384 41 | 27,632 75 |
| Fuel, Coal and Oil | 597 80 | 768 00 | 984 80 | 438 80 | 372 60 | 776 75 | 797 40 | 656 95 | 603 25 | 791 80 | 557 50 | 831 60 | 8,086 65 |
| Water | 15 15 | 19 80 | 22 80 | 12 00 | 10 80 | 18 00 | 17 40 | 2 40 | 3 00 | 5 40 | 17 40 | 28 80 | 172 95 |
| Subsistence | 583 64 | 670 28 | 703 86 | 650 03 | 664 11 | 593 53 | 706 71 | 655 83 | 545 43 | 564 36 | 535 28 | 637 83 | 7,549 89 |
| Wharfage | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | | | | | | | 60 00 |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | 87 31 | 282 50 | 210 69 | 257 21 | 473 94 | 100 92 | 102 91 | 288 44 | 283 59 | 216 20 | 254 99 | 463 80 | 3,022 50 |
| Stores General | 57 12 | 186 27 | 50 05 | 208 00 | 68 40 | 30 50 | 46 33 | 41 92 | 55 08 | 23 06 | 75 49 | 59 03 | 901 85 |
| Repairs Material | 1,029 73 | 654 62 | 1,261 59 | 1,069 72 | 1,305 04 | 606 91 | 211 07 | 208 82 | 2,926 98 | 1,514 56 | 1,519 28 | 744 32 | 13,052 64 |
| Repairs Wages | | | | 840 95 | | | | | | | | | 840 95 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 84 00 | 10 85 | 35 05 | 16 55 | 16 70 | 90 05 | 7 10 | 11 75 | 24 60 | 4 75 | 7 40 | 3 00 | 311 80 |
| Total Expenses | 4,760 72 | 5,079 63 | 5,595 67 | 5,007 97 | 5,297 17 | 4,573 40 | 4,285 38 | 4,445 98 | 6,551 39 | 5,551 42 | 5,301 06 | 5,152 19 | 61,601 98 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | | | From | To | | $ cts. |
| *Point Hope* | April 1, 1914 | Mar. 31, 1915 | Victoria | $13,601 94 | | | | | |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingences. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts. | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts |
| Victoria Harbour | 27,632 75 | 8,086 65 | 172 95 | 7,519 89 | 60 00 | ..... | 3,022 50 | 901 85 | 13,052 64 | 840 95 | ..... | 311 80 | 61,601 98 |
| Totals | 27,632 75 | 8,086 65 | 172 95 | 7,519 89 | 60 00 | ..... | 3,022 50 | 901 85 | 13,052 64 | 840 95 | ..... | 311 80 | 61,601 98 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Victoria Harbour | April 1..... | Mar. 31..... | Clay and hardpan. ..... | 203,250 | 5,061 | 2,735·5 | $22·52 | 30·3c. |
| Totals | ..... | ..... | ..... | 203,250 | 5,061 | 2,735·5 | $22·52 | 30·3c. |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Victoria Harbour | 178·5 | 115·5 | 62·5 | ..... | 3· | 90 | 5·5 | ..... | 93·5 | 10·5 | 0·5 |
| Victoria Machinery Depot | 267· | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Victoria Harbour | 241· | 208·5 | 125·5 | 8·5 | 4·5 | 90·5 | 90· | ..... | 140·5 | 9·5 | ..... |
| Victoria Machinery Depot | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Victoria Harbour | 27·5 | 45· | 4· | ..... | ..... | ..... | 2·5 | ..... | 28· | ..... | ..... |
| Totals, hours | 714· | 369· | 192· | 8·5 | 7·5 | 180·5 | 98· | ..... | 262· | 20· | 0·5 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Victoria Harbour | 10·5 | ..... | ..... | ..... | 69·5 | 639·5 | April 1 to July 16, 1914. |
| Victoria Machinery Depot | ..... | ..... | ..... | ..... | 38·5 | 305·5 | July 16 to August 19, 1914. |
| Victoria Harbour | ..... | 19· | ..... | ..... | 200· | 1,137·5 | August 20 to February 15, 1915. |
| Victoria Machinery Depot | ..... | ..... | 90·5 | ..... | ..... | 90·5 | February 15 to February 25, 1915. |
| Victoria Harbour | ..... | ..... | ..... | ..... | 45·5 | 152·5 | February 26 to March 31, 1915. End of fiscal year. |
| Totals, hours | 10·5 | 19· | 90·5 | ..... | 353·5 | 2,325·5 | |

General Remarks: July 16th to August 20th, 1914—changing dipper teeth; unshipping dipper arm; Dismantling spuds, etc. February 15th to February 25th, 1915—Annual Overhaul and Inspection of Boilers.

DREDGE, P.W D. No. 313 ("VICTORIA") PROVINCE OF BRITISH COLUMBIA.

Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 796 | 929 | 279 | 1,471 | 3,780 | 3,425 | 3,145 | 1,430 | 2,905 | 1,830 | 1,560 | 2,395 | 23,870 |
| Class of material | Rock | Rock | Rock | Rock, mud & clay. | Rock & clay | Rock & clay | Rock & clay | Rock | Rock & mud | Rock | Rock | Rock & hard clay | |
| Total possible dredging time hrs | 229 | 224·5 | 229 | 238·5 | 224·5 | 229 | 234 | 219·5 | 238·5 | 224·5 | 210 | 238·5 | 2,739·5 |
| Total time lost hrs | 139 | 116 | 184·5 | 141 | 64·5 | 76 | 54·5 | 85·5 | 102·5 | 66·5 | 65·5 | 60·5 | 1,156 |
| Hours actually dredging | 90 | 108·5 | 44·5 | 97·5 | 160 | 133 | 179·5 | 134 | 136 | 158 | 144·5 | 178 | 1,583·5 |
| C.yds. handled per hour | 8·8 | 8·9 | 6·2 | 15 | 23·6 | 21·7 | 17·5 | 10·6 | 21·3 | 11·5 | 10·8 | 13·4 | |

Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 463 33 | 472 42 | 470 00 | 484 35 | 499 98 | 500 00 | 500 00 | 554 16 | 545 00 | 545 00 | 545 00 | 545 00 | 6,124 24 |
| Fuel, Coal and Oil | 132 00 | 66 00 | 79 20 | 59 00 | 118 00 | 118 00 | 196 90 | 129 80 | 151 99 | 73 50 | 130 50 | 80 56 | 1,335 45 |
| Water | | | | | 1 00 | | | | 1 50 | | | | 2 50 |
| Subsistence | 162 68 | 177 86 | 129 39 | 176 43 | 151 09 | 101 04 | 93 69 | 187 69 | 150 81 | 113 68 | 118 81 | 127 22 | 1,690 39 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | 267 80 | 199 27 | 29 80 | 23 43 | 217 95 | 53 47 | 84 85 | 325 00 | 57 75 | 184 02 | | | 1,443 34 |
| Stores General | 18 98 | 15 35 | 48 70 | 13 55 | | 4 95 | 5 00 | 11 68 | 4 45 | 13 65 | 11 50 | | 147 81 |
| Repairs Material | 354 59 | 34 64 | 968 64 | | 739 68 | 560 98 | 1,414 58 | 675 77 | 344 12 | | | 2 22 | 5,095 22 |
| Repairs Wages | | | | | | | | | | | | | |
| Rental of tugs | | | | | | | | | | 35 00 | | | 35 00 |
| Contingencies | 43 00 | | 55 49 | 9 75 | | | | | 46 10 | | 68 00 | 191 65 | 413 99 |
| Total Expenses | 1,442 38 | 965 54 | 1,781 22 | 766 51 | 1,727 70 | 1,338 44 | 2,295 02 | 1,884 10 | 1,301 72 | 964 85 | 873 81 | 946 65 | 16,287 94 |

Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| | | | | | "Launch" | Dec. 19 | | Nanaimo | 2 00 |
| | | | | | "Row Boat" | Jan. 14 | 31 | " | 18 00 |
| | | | | | Thos. R. McLay's boat | Jan. 20 | 21 | " | 15 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts | $ cts. | $ cts | $ cts. | $ cts. | $ cts. |
| Victoria Harbour | 4,182 86 | 912 11 | 1 71 | 1,154 54 | ..... | ..... | 985 80 | 100 95 | 3,480 04 | ..... | 23 99 | 282 75 | 11,124 66 |
| Tod Inlet | 636 21 | 138 73 | 0 26 | 175 60 | ..... | ..... | 149 94 | 15 36 | 529 31 | ..... | 3 63 | 43 00 | 1,692 04 |
| Nanaimo Harbour | 1,305 17 | 284 61 | 0 53 | 360 25 | ..... | ..... | 307 60 | 31 50 | 1,085 87 | ..... | 7 47 | 88 24 | 3,471 24 |
| Totals | 6,124 24 | 1,335 45 | 2 50 | 1,690 39 | ..... | ..... | 1,443 34 | 147 81 | 5,095 22 | ..... | 35 09 | 413 99 | 16,287 94 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Victoria Harbour | April 1 | Dec. 5 | Rock and clay | 15,380 | 1,871 | 676·5 | $11 39 | 72·3c. |
| Tod Inlet | Mar. 13, Dec. 7. | Mar. 31, Dec. 19 | " | 3,660 | 253 | 164·5 | 10 28 | 46·2c. |
| Nanaimo Harbour | Dec. 21 | Mar. 12 | " | 4,830 | 615·5 | 442·5 | 7 84 | 71·8c. |
| Totals, hours | | | | 23,870 | 2,739·5 | 1,583·5 | 10 28 | 68·23c. |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Victoria Harbour | 85 | 43·25 | 12 | ..... | ..... | 19 | 8·5 | ..... | 4·75 | ..... | 3 |
| Yarrow's Shipyard | 148 | ..... | ..... | ..... | ..... | 19 | ..... | ..... | ..... | ..... | ..... |
| Victoria Harbour | 224·5 | 36 | 55 | ..... | 8·5 | 28·5 | 49·5 | ..... | 30·5 | 9·5 | 19 |
| Tod Inlet | 6·5 | 6 | ..... | ..... | ..... | ..... | 31 | ..... | 37 | ..... | 1 |
| Nanaimo Harbour | 50·5 | 10·5 | 15·5 | ..... | ..... | 19 | 61 | ..... | ..... | 13 | ..... |
| Totals, hours | 514·5 | 95·75 | 82·5 | ..... | 8·5 | 85·5 | 150 | ..... | 72·25 | 22·5 | 23 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Victoria Harbour | ·5 | ..... | ..... | ..... | 26·5 | 202·5 | April to May 25, 1914. |
| Yarrow's Shipyard | ..... | ..... | ..... | ..... | ..... | 167 | May 25 to June 15, 1914. |
| Victoria Harbour | 3·5 | ..... | ..... | ..... | 60·5 | 525 | June 16 to Dec. 5, 1914. |
| Tod Inlet | ..... | ..... | ..... | ..... | 7 | 88·5 | Dec. 7 to Dec. 19, 1914. Mar. 13 to Mar. 31. |
| Nanaimo Harbour | ..... | ..... | ..... | ..... | 3·5 | 173 | Dec. 21 to Mar. 12, 1915. End of Fiscal Year. |
| Totals, hours | 4 | ..... | ..... | ..... | 97·5 | 1,156 | |

General Remarks: Annual Overhaul at Yarrow's, May 25 to June 15, 1914.

## No. 1 LOBNITZ ROCK BREAKER, PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Blows | 23,834 | 19,787 | 28,982 | 18,548 | 49,985 | 43,880 | 46,772 | 44,523 | 32,783 | 44,533 | 37,076 | 47,651 | 438,354 |
| No. of Holes | 1,891 | 1,366 | 1,885 | 884 | 3,336 | 3,215 | 3,705 | 3,682 | 2,648 | 3,633 | 3,196 | 3,813 | 33,254 |
| Class of material | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock |
| Total possible dredging time hrs | 365·5 | 319 | 397 | 354 | 487 | 460 | 465 | 440 | 406 | 450 | 406·5 | 479 | 5,029 |
| Total time lost hrs | 183·75 | 174·5 | 177·5 | 206 | 101·5 | 108·25 | 107 | 116·5 | 164 | 120 | 129 | 126·5 | 1,714·5 |
| Hours actually dredging | 181·75 | 144·5 | 219·5 | 148 | 385·5 | 351·75 | 358 | 323·5 | 242 | 330 | 277·5 | 352·5 | 3,314·5 |
| No. of Blows per hour | 131 | 137 | 132 | 125 | 129·5 | 124·5 | 124 | 138·5 | 135·5 | 138 | 133·5 | 135 | ..... |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 1,272 16 | 1,110 70 | 1,170 16 | 1,149 99 | 1,179 03 | 1,184 74 | 1,213 74 | 1,180 16 | 1,197 11 | 1,197 95 | 1,167 67 | 1,218 53 | 14,241 94 |
| Fuel, Coal and Oil | 278 18 | 202 10 | 416 52 | 244 17 | 439 35 | 410 85 | 434 10 | 424 80 | 302 26 | 465 58 | 309 11 | 374 78 | 4,301 80 |
| Water | | 0 30 | 2 45 | 7 15 | 1 80 | 3 20 | 3 80 | | | 20 00 | | 13 80 | 52 50 |
| Subsistence | 338 72 | 304 11 | 309 79 | 330 86 | 297 38 | 284 42 | 204 84 | 280 14 | 234 17 | 215 03 | 308 10 | 281 25 | 3,388 81 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 267 84 | 171 29 | 143 59 | 1,867 85 | 102 48 | 1,359 55 | 109 58 | 94 06 | 223 76 | 3,388 82 | 147 62 | 76 65 | 7,953 09 |
| Stores (General | 22 05 | 88 90 | 92 25 | 34 72 | 18 65 | 24 96 | 23 77 | 65 77 | 103 37 | 19 06 | 21 00 | 0 64 | 515 74 |
| Repairs (Material | 420 95 | | 1,362 73 | 2,209 08 | 575 84 | 1,498 60 | 639 34 | 69 97 | 1,384 44 | 320 68 | 1,120 42 | 94 86 | 9,696 91 |
| Repairs (Wages | | | 12 00 | | | | | | | | | | 12 00 |
| Rental of tugs | | | | | | | | | | | | | |
| Contingencies | 64 45 | 13 40 | 21 76 | 6 75 | | 1 50 | 1 00 | 4 63 | 8 85 | 1 50 | 1 00 | 64 00 | 188 84 |
| Total Expenses | 2,664 35 | 1,890 80 | 3,531 25 | 5,850 57 | 2,614 53 | 4,767 82 | 2,630 17 | 2,119 53 | 3,453 96 | 5,628 62 | 3,075 52 | 2,124 51 | 40,351 63 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | |
|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. | Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts |
| Victoria Harbour | 14,241 94 | 4,301 80 | 52 50 | 3,388 81 | ..... | ..... | 7,953 09 | 515 74 | 9,696 91 | 12 00 | | 188 84 | 40,351 63 |
| Totals | 14,241 94 | 4,301 80 | 52 50 | 3,388 81 | ..... | ..... | 7,953 09 | 515 74 | 9,696 91 | 12 00 | | 188 84 | 40,351 63 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Working. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Victoria Harbour | April 1 | Mar. 31 | Rock | 16,830 | 5,029 | 3,314·5 | $12 17 | $2 39 |
| Totals | ..... | ..... | ..... | 16,830 | 5,029 | 3,314·5 | $12 17 | $2 39 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Placing Moorings. | Tide and Current. | Holidays. | Waiting on | | Sounding with chisel. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Victoria Harbour | 803 | 23·5 | 51·5 | 177 | 4·25 | 180 | ..... | | 16·5 | 36 | 7·5 |
| Totals, hours | 803 | 23·5 | 51·5 | 177 | 4·25 | 180 | ..... | | 16·5 | 36 | 7·5 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | *Plant. | Boilers. | | | | | |
| Victoria Harbour | ..... | 26 | 59 | ..... | 330·25 | 1,714·5 | April 1, 1914 to Mar. 31, 1915 End of Fiscal Year. |
| Totals, hours | ..... | 26 | 59 | ..... | 330·25 | 1,714·5 | |

General Remarks: Rock Breaker No. 1 at V. M. D., April 20, 1914 to May 18, 1914. Inspecting boilers, straightening plates in forward well, repairing fracture in stern plate, etc

P.W.D. No. 2 ("LOBNITZ ROCK BREAKER) PROVINCE OF BRITISH COLUMBIA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Blows | 3,838 | 13,283 | 14,495 | 13,059 | 6,436 | 6,682 | 18,358 | 17,429 | 23,499 | 17,050 | 16,961 | 23,016 | 174,106 |
| No. of Holes | 242 | 842 | 1,134 | 1,216 | 730 | 560 | 1,571 | 1,377 | 1,674 | 1,160 | 1,090 | 1,871 | 13,467 |
| Class of material | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock |
| Total possible dredging time hrs | 90·5 | 224·5 | 229· | 238·5 | 224·5 | 219·5 | 234· | 219·50 | 238·5 | 224·5 | 210· | 238·5 | 2,591·5 |
| Total time lost hrs | 53·75 | 112·25 | 109·25 | 113·75 | 158· | 153·75 | 82· | 90·25 | 66· | 93·75 | 89·75 | 77·25 | 1,199·75 |
| Hours actually dredging | 36·75 | 112·25 | 119·75 | 124·75 | 66·5 | 65·75 | 152· | 129·25 | 172·5 | 130·75 | 120·25 | 161·25 | 1,391 75 |
| No. of Blows | 104· | 118· | 121· | 104,5 | 96·5 | 101·5 | 127· | 134·5 | 136· | 130·4 | 141· | 142·7 | ..... |

DETAILS OF EXPENDITURE BY MONTHS.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 707 00 | 807 56 | 716 27 | 682 08 | 729 50 | 729 00 | 729 51 | 735 00 | 728 54 | 731 44 | 727 84 | 726 60 | 8,750 34 |
| Fuel, Coal and oil | 200 00 | 140 25 | 230 00 | 213 80 | 51 62 | 230 01 | 227 05 | 264 01 | 275 61 | 272 41 | 276 67 | 225 95 | 2,607 38 |
| Water | ..... | ..... | 20 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 10 00 | 110 00 |
| Subsistence | 191 97 | 341 43 | 295 13 | 293 63 | 236 23 | 222 02 | 208 87 | 101 76 | 341 89 | 208 32 | 194 07 | 208 48 | 2,843 80 |
| Wharfage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pilotage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stores/Machinery | 3,064 73 | 113 04 | 109 89 | 151 92 | 106 90 | 329 85 | 48 36 | 324 22 | 72 98 | 13 77 | 43 68 | 183 88 | 4,563 22 |
| \General | 16 15 | 10 15 | 14 85 | 4 85 | 103 15 | 54 30 | 6 90 | ..... | 45 16 | 38 70 | 442 82 | 66 40 | 360 61 |
| Repairs/Material | 170 06 | 291 17 | 156 12 | 46 24 | 55 00 | 1,038 00 | 1,134 30 | 1,124 92 | 217 36 | 82 99 | ..... | 72 40 | 4,831 38 |
| \Wages | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Rental of tugs | ..... | 12 00 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 12 00 |
| Contingencies | 80 05 | ..... | 29 00 | 6 60 | 21 75 | 0 70 | ..... | 4 80 | ..... | 5 00 | ..... | 15 45 | 17 00 |
| | | | | | | | | | | | | | 158 35 |
| Total Expenses | 4,429 96 | 1,715 60 | 1,571 26 | 1,409 12 | 1,314 15 | 2,613 88 | 2,364 99 | 2,564 71 | 1,691 54 | 1,362 63 | 1,695 08 | 1,509 16 | 24,242 08 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| | | | | | "Row Boat" | May 1 | 22nd. | Nanaimo | 12 00 |
| | | | | | "Launch" | Jan. 21 | | " | 5 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Nanaimo Harbour | 8,750 34 | 2,607 38 | 110 00 | 2,843 80 | ..... | ..... | 4,563 22 | 360 61 | 4,831 38 | ..... | 17 00 | 158 35 | 24,242 08 |
| Totals | 8,750 34 | 2,607 38 | 110 00 | 2,843 80 | ..... | ..... | 4,563 22 | 360 61 | 4,831 38 | ..... | 17 00 | 158 35 | 24,242 08 |

| Expenses Working at | Time Working. | | Kind of Material. | Estimated No. C. Yds. Broken | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Working. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Nanaimo Harbour | April 20 | Mar. 31 | Rock | 11,095 | 2,591·5 | 1,391·75 | $17·41 | $2·18 |
| Totals | ..... | ..... | ..... | 11,095 | 2,591·5 | 1,391·75 | $17·41 | $2·18 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays | Waiting on | | Placing Moorings. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Nanaimo Harbour | 534·25 | 151·5 | 22·75 | 1 | 21·25 | 57 | ..... | ..... | 52·5 | 130·5 | 1·5 |
| Totals, hours | 534·25 | 151·5 | 22·75 | 1 | 21·25 | 57 | ..... | ..... | 52·5 | 130·5 | 1·5 |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Sounding. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Nanaimo Harbour | ..... | 9·5 | ..... | 2 | 216 | 1,199·75 | April 20th, 1914, to Mar. 31st, 1915. End of Fiscal Year. |
| Totals, hours | ..... | 9·5 | ..... | 2 | 216 | 1,199·75 | |

General Remarks: Dredge put into Commission at Nanaimo Harbour on April 20th, 1914; still working on March 31st, 1915. Dredge only working single shift. General overhaul at Wallace Shipyards, August 22nd, 1914, to September 4th, 1914.

P. W. D. No. 1 & 2 (DRILLING PLANT), PROVINCE OF BRITISH COLUMBIA.

DETAILS OF MATERIAL AND TIME BY MONTHS.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | | | | | | | | | | | | 19,794 |
| Class of material | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | Rock | |
| Total possible dredging time | | | | | | | | | | | | | |
| Total time lost | | | | | | | | | | | | | |
| Hours actually dredging | | | | | | | | | | | | | |
| C.yds. handled per hour | | | | | | | | | | | | | |

DETAILS OF EXPENDITURE BY MONTHS.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 2,243 21 | 2,220 80 | 2,222 72 | 2,297 50 | 2,358 33 | 2,374 32 | 2,230 74 | 2,279 99 | 2,398 34 | 2,393 00 | 2,318 86 | 2,229 61 | 27,567 42 |
| Fuel, coal, and oil | 361 64 | 246 04 | 351 61 | 310 19 | 267 91 | 371 38 | 423 40 | 376 59 | 350 92 | 364 49 | 239 68 | 540 31 | 4,204 16 |
| Water | | | | | | | | | | | | | |
| Subsistence | | | | | | | | | | | | | |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores (Machinery | 121 07 | 210 95 | 1,257 38 | 662 92 | 332 61 | 137 46 | 161 30 | 271 74 | 233 00 | 224 07 | 402 67 | 103 96 | 4,119 20 |
| Stores (General | 123 40 | 52 78 | 10 76 | 121 94 | 67 19 | 85 86 | 61 50 | 13 86 | 64 80 | 13 25 | 14 95 | 38 00 | 668 29 |
| Repairs (Material | 1,865 78 | 788 73 | 339 59 | 27 42 | 160 45 | 424 22 | 47 66 | | 371 70 | 2 42 | 2 08 | 79 08 | 4,109 13 |
| Repairs (Wages | | | | | | | | | | | | | |
| Rental of tugs | | | 62 00 | | | | | | | | | | 62 00 |
| Contingencies | 628 51 | 877 38 | | 1,089 77 | 877 05 | 904 90 | 887 77 | 1,101 53 | 895 63 | 992 02 | 1,210 40 | 1,348 20 | 10,804 16 |
| Total expenses | 5,343 61 | 4,396 68 | 4,244 06 | 4,509 81 | 4,063 54 | 4,298 14 | 3,812 37 | 4,043 71 | 4,314 39 | 3,989 25 | 4,188 64 | 4,339 16 | 51,534 36 |

DETAILS OF TUG SERVICE—Tugs in attendance and included in these operations.

| DEPARTMENT TUGS. | | | | | RENTED TUGS. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | | | From | To | | |
| | | | | | "Louise and Star" | May 1 | 31 | Victoria Harbour | 62 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Victoria Harbour | 27,567 42 | 4,204 16 | ..... | ..... | ..... | ..... | 4,119 20 | 668 29 | 4,109 13 | ..... | 62 00 | 10,804 16 | 51,534 36 |
| Totals | 27,567 42 | 4,204 16 | ..... | ..... | ..... | ..... | 4,119 20 | 668 29 | 4,109 13 | ..... | 62 00 | 10,804 16 | 51,534 36 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Expenses Working at. | Time Working. | | Kind of Material. | No of c. yds. Moved Estimated. | Cost per Cubic Yard. |
|---|---|---|---|---|---|
| | From | To | | | |
| Victoria Harbour | April 1 | March 31 | Rock | 19·794 | $ 2.60 |

*Distribution of time not kept, owing to the lack of proper Weekly Report Forms. In order to cope with this, a supply of revised weekly report forms were ordered from Ottawa and are now to hand.

## DREDGE, P.W.D. No. 302 ("BITTERN") PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

| Items. | April. | May | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 2,885 | 5,400 | ..... | ..... | 7,830 | 5,940 | 6,750 | 4,725 | 6,615 | 6,210 | 5,670 | 5,425 | 57,450 |
| Class of material | Gravel,sand | Gravel,sand | ..... | ..... | Sand & | Gravel..... | Coarse | Sand, clay | Sand and | Clay and | Clay and | Sand and | ..... |
| Total possible dredging time ..... hrs | and rocks. 234 | and rocks. 198 | ..... | ..... | gravel. 225 | 234 | gravel. 243 | and gravel. 225 | gravel. 243 | gravel. 234 | gravel. 216 | rocks. 243 | 2,295 |
| Total time lost ..... hrs | 115 | 54 | ..... | ..... | 51 | 41 | 15 | 54·5 | 25 | 33 | 21 | 27 | 436·5 |
| Hours actually dredging | 119 | 144 | ..... | ..... | 174 | 193 | 228 | 170·5 | 218 | 201 | 195 | 216 | 1,858·5 |
| C.yds. handled per hour | 24·2 | 34·5 | ..... | ..... | 45 | 30·8 | 29·6 | 27·7 | 30·3 | 30·9 | 29·1 | 25·1 | ..... |

### Details of Expenditure by Months.

| Items of Expense. | $ cts | $ cts | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts | $ cts | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 492 40 | 511 10 | ..... | ..... | 605 88 | 620 00 | 620 00 | 620 00 | 620 00 | 617 25 | 568 34 | 620 00 | 5,894 97 |
| Fuel, Coal and Oil | 223 38 | ..... | ..... | ..... | ..... | 156 28 | ..... | 194 99 | ..... | 148 50 | ..... | 155 93 | 879 58 |
| Water | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Subsistence | 167 03 | 182 82 | ..... | ..... | 237 50 | 210 40 | 219 65 | 256 05 | 233 20 | 309 50 | 193 90 | 232 25 | 2,251 39 |
| Wharfage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pilotage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stores (Machinery | 24 36 | 9 37 | ..... | ..... | 12 49 | 156 84 | 12 42 | 4 10 | 17 71 | 126 51 | 43 02 | 67 70 | 474 52 |
| (General | 15 10 | 2 55 | ..... | ..... | 27 01 | ..... | 3 79 | 4 35 | ..... | ..... | 10 88 | 3 80 | 67 48 |
| Repairs (Material | 62 47 | 49 28 | 407 54 | 260 13 | 36 60 | 90 82 | 183 25 | 1 00 | 45 65 | 28 26 | ..... | ..... | 1,165 00 |
| (Wages | 105 10 | 56 30 | 270 00 | 299 31 | 50 49 | ..... | ..... | ..... | ..... | 2 75 | 51 06 | ..... | 835 61 |
| Rental of tugs | 35 00 | 86 00 | ..... | ..... | 130 00 | 621 00 | 702 00 | 675 00 | 675 00 | 615 00 | 594 00 | 729 00 | 4,862 00 |
| Contingencies | ..... | 2 50 | ..... | ..... | ..... | 7 05 | 1 45 | 8 35 | ..... | 12 95 | ..... | 14 65 | 46 95 |
| Total Expenses | 1,098 34 | 899 92 | 677 54 | 559 44 | 1,099 97 | 1,871 39 | 1,742 56 | 1,763 84 | 1,591 56 | 1,860 81 | 1,461 80 | 1,823 33 | 16,477 50 |

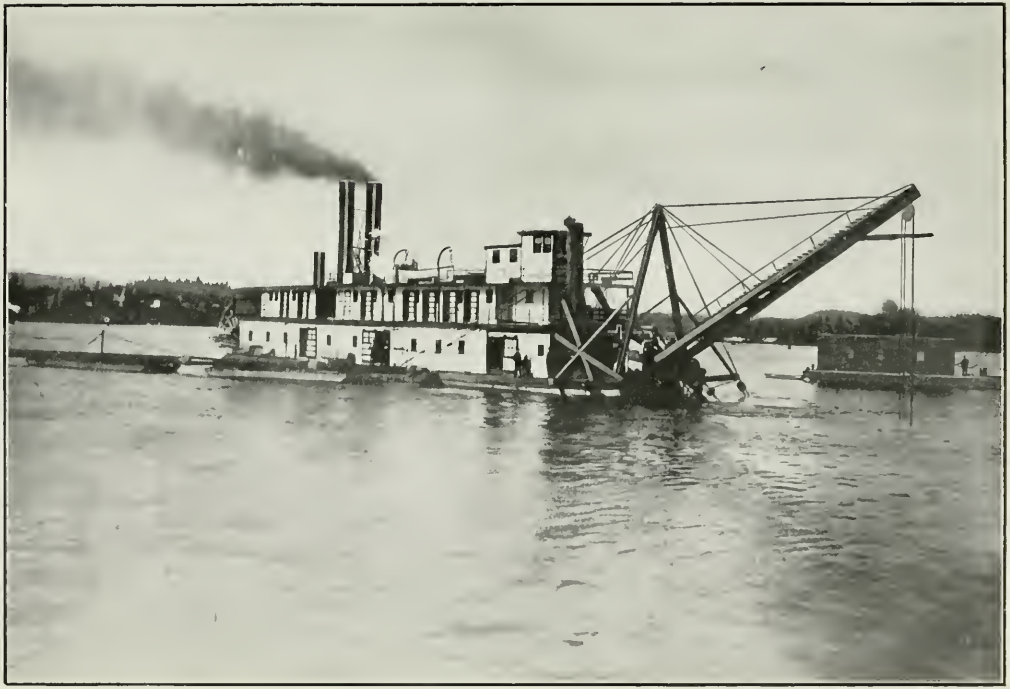
### Details of Tug Service—Tugs in attendance, and included in these operations.

**Department Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts. |
|---|---|---|---|---|

**Rented Tugs.**

| Name of Tug. | Employed. From | Employed. To | Locality. | Expense. $ cts |
|---|---|---|---|---|
| *Ondot* | April 1. | ..... | Long Beach | 27 00 |
| *Comet* | Apr. 9 & 22 | ..... | Nelson Ferry | 8 00 |
| " | May 1. | May 26. | Nelson Harbour | 86 00 |
| " | Aug. 3. | Aug. 31. | " | 130 00 |
| *Ondot* | Sept. 1. | Sept. 30. | Proctor Narrows | 621 00 |
| " | Oct. 1. | Oct. 31. | " | 702 00 |
| " | Nov. 2. | Nov. 30. | " | 675 00 |
| " | Dec. 1. | Dec. 31. | " | 675 00 |
| " | Jan. 2. | Jan. 31. | " | 615 00 |
| " | Feb. 5. | Feb. 28 | " | 594 00 |
| " | Mar. 1 | Mar. 31. | " | 729 00 |



Dredge "King Edward", Fraser River, B.C.

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | STORES. | | REPAIRS. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts | $ cts | $ cts. | $ cts. | $ cts |
| Longbeach | 63 67 | 9 50 | | 24 32 | | | 5 12 | 0 73 | 12 58 | 9 02 | 27 00 | 0 51 | 152 45 |
| Nelson Ferry Landings | 131 67 | 34 57 | | 88 48 | | | 18 65 | 2 65 | 45 78 | 32 84 | 8 00 | 1 85 | 364 49 |
| Cedar Creek | 85 48 | 12 75 | | 32 64 | | | 6 88 | 0 98 | 18 89 | 12 12 | | 0 68 | 168 42 |
| Nelson Harbour | 1,008 73 | 150 49 | | 385 21 | | | 81 19 | 11 55 | 199 33 | 142 97 | 216 00 | 8 03 | 2,203 50 |
| Proctor Narrows | 4,605 42 | 672 27 | | 1,720 74 | | | 362 68 | 51 57 | 890 42 | 638 66 | 4,611 00 | 35 88 | 13,588 64 |
| Totals | 5,894 97 | 879 58 | | 2,251 39 | | | 474 52 | 67 48 | 1,165 00 | 835 61 | 4,862 00 | 46 95 | 16,477 50 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Longbeach | April 1 | April 4 | Sand and gravel | 755 | 36 | 20 | $7·622 | $0·201 |
| Nelson Ferry Landings | " 9 | " 21 | " | 1,810 | 126 | 72 | 5·062 | 0·201 |
| Cedar Creek | " 22 | " 28 | " | 320 | 54 | 27 | 6·237 | 0·526 |
| Nelson Harbour | " 30 | May 26 | Sand, gravel and fine silt | 13,230 | 432 | 318 | 6·929 | 0·167 |
| | Aug. 4 | Aug. 29 | | | | | | |
| Proctor Narrows | Sept. 1 | Mar. 31 | Sand, gravel & boulders | 41,470 | 1,647 | 1,421·5 | 9·559 | 0·327 |
| Totals | | | | 57,585 | 2,295 | 1,858·5 | $8·866 | $0·286 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | WAITING ON | | Towing, etc. | PROCURING. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Longbeach | | | | | | | 2 | | 14 | | |
| Nelson Ferry Landings | 18 | 2 | | | | 18 | | | 5 | | |
| Cedar Creek | 9 | | | | | | | | 9 | 9 | |
| Nelson Harbour | 18 | 8 | | | | 9 | 63 | | 15 | | |
| Proctor Narrows | 39 | 12 | 3 | | | 45 | 13·5 | | 33 | 33 | |
| Totals, hours | 84 | 22 | 3 | | | 72 | 78·5 | | 76 | 42 | |

| Time Lost at | CLEANING. | | Inspecting Boilers. | Short Supplies. | Miscellaneous | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Longbeach | | | | | | 16 | |
| Nelson Ferry Landings | 2 | 9 | | | | 54 | |
| Cedar Creek | | | | | | 27 | No unusual delays. Actual working time 81 % of possible working time. |
| Nelson Harbour | 1 | | | | | 114 | |
| Proctor Narrows | 29 | 18 | | | | 225·5 | |
| Totals, hours | 32 | 27 | | | | 436·5 | |

Dredge put into commission at Nelson on April 1; ended for season at Proctor on March 31, 1915.
General Remarks: Work at Proctor Narrows includes Fraser's, Longbeach, Balfour and Ainsworth.

## DREDGE, P.W.D. No. 304 ("HERON") PROVINCE OF BRITISH COLUMBIA

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | | 1,327 | 1,575 | 4,135 | 3,937 | 4,809 | 4,695 | 3,070 | 2,172 | | 3,279 | 4,169 | 33,168 |
| Class of material | | Gravel | Gravel | Gravel | Gravel | Mud | Sand and mud. | Mud | Mud & cemented clay and sand. | | Mud and cemented sand and clay. | Mud, sand & cemented sand, clay and gravel. | |
| Total possible dredging time hrs | 193 | 234 | 234 | 243 | 234 | 234 | 243 | 225 | 153 | | 216 | 243 | 2,452 |
| Total time lost hrs | 193 | 163 | 151 | 33 | 37½ | 24½ | 51 ½ | 95 | 54½ | | 42½ | 29 | 874½ |
| Hours actually dredging | | 71 | 83 | 210 | 196½ | 209½ | 191½ | 130 | 98½ | | 173½ | 214 | 1,577 |
| C.yds. handled per hour | | 18·6 | 18·9 | 19·7 | 20 | 22·9 | 24·5 | 23·6 | 22 | | 18·9 | 19·4 | 21·02 |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 533 16 | 547 71 | 423 66 | 445 00 | 445 00 | 439 66 | 545 00 | 445 00 | 385 14 | 192 00 | 455 00 | 464 00 | 5,320 33 |
| Fuel, Coal and Oil | | 97 00 | 33 00 | 99 00 | 103 50 | 57 50 | 69 00 | 69 00 | 57 50 | | 110 00 | 66 00 | 761 50 |
| Water | | | | | | | | | | | | | |
| Subsistence | 4 00 | 186 16 | 185 56 | 168 86 | 227 48 | 176 79 | 191 26 | 174 87 | 127 74 | | 164 17 | 323 37 | 1,930 26 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores Machinery | 164 83 | 103 65 | | 26 75 | 1 25 | | 23 10 | 21 70 | 23 45 | 6 27 | 14 45 | 186 75 | 572 20 |
| General | 7 83 | 5 50 | | | | 5 00 | | | | 10 60 | 10 00 | | 38 93 |
| Repairs Material | 7 56 | 31 54 | 15 95 | 10 19 | 21 41 | 96 11 | | 4 03 | | | | | 186 79 |
| Wages | 1 00 | | | | | | | | | | | | 1 00 |
| Rental of tugs | | 15 00 | 6 00 | | 11 00 | 15.00 | 16 00 | 9 50 | | | | | 72 50 |
| Contingencies | 5 25 | 5 75 | 12 50 | 5 00 | 8 80 | 6 50 | 13 75 | 9 40 | 3 00 | 13 00 | 1 50 | 4 00 | 88 45 |
| Total Expenses | 723 63 | 992 31 | 676 67 | 754 80 | 818 44 | 796 56 | 858 11 | 733 50 | 596 83 | 221 87 | 755 12 | 1,044 12 | 8,971 96 |

### Details of Tug Service—Tugs in attendance and included in these operations.

#### Department Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|

#### Rented Tugs.

| Name of Tug. | Employed. From | Employed. To | Locality. | Expenses. $ cts. |
|---|---|---|---|---|
| *Mallard* | May 7 | | Penticton | 15 00 |
| *Mallard* | June 17 & 30 | | " | 6 00 |
| *Unknown* | Aug. 21 | | | 5 00 |
| *Mallard* | Aug. 28 & 29 | | | 6 00 |
| " | Sept. 29 | | | 15 00 |
| " | Oct. 6 | | | 3 00 |
| " | Oct. 15 | | | 3 00 |
| " | Oct. 16 | | | 10 00 |
| " | Nov. 3 | | | 1 00 |
| " | Nov. 5 | | | 1 00 |
| " | Nov. 6 | | | 7 50 |
| | | | | $72 50 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Okanagan River between Upper & Lower Okanagan Lakes | 4,667 71 | 668 09 | ..... | 1,693 48 | ..... | ..... | 502 01 | 34 15 | 163 87 | 0 87 | 72 50 | 77 59 | 7,880 27 |
| Cut for Penticton Lumber Co | 185 50 | 26 55 | ..... | 67 30 | ..... | ..... | 19 95 | 1 36 | 6 52 | 0 03 | ..... | 3 09 | 310 30 |
| Berth for Controlling Dam | 467 12 | 66 86 | ..... | 169 48 | ..... | ..... | 50 24 | 3 42 | 16 40 | 0 10 | ..... | 7 77 | 781 39 |
| Totals | 5,320 33 | 761 50 | ..... | 1,930 26 | ..... | ..... | 572 20 | 38 93 | 186 79 | 1 00 | 72 50 | 88 45 | 8,971 96 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Okanagan River between Upper and Lower Lakes | April 1 | Dec. 20 | Sand, clay and gravel | 29,473 | 2,241 | 1,384 | $5 69 | 26·73c. |
| | March 5 | Mar. 31 | | | | | | |
| Cut for Penticton Lumber Co | Feb. 1 | Feb 9 | Clay and sand | 1,180 | 72 | 55 | 5 64 | 26·29c |
| Berth for Controlling Dam | Feb. 10 | Mar. 4 | Cemented clay and sand | 2,515 | 180 | 138½ | 5 64 | 31·06c |
| Totals | ..... | ..... | ..... | 33,168 | 2,493 | 1,577½ | $5·687 | 27·05c. |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Taking out logs. | Clearing out river. | Holidays | Waiting on | | Towing, etc. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Okanagan River between Upper & Lower Okanagan Lakes | 168 | 86 | 12 | 9 | 364 | 63 | ..... | ..... | 2 | 26 | ..... |
| Cut for Penticton Lumber Co | 3 | 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Berth for Controlling Dam | 9 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | ..... |
| Totals, hours | 180 | 99 | 12 | 9 | 364 | 63 | ..... | ..... | 2 | 30 | ..... |

| Time Lost at | Cleaning. | | Preparing for work. | Short Supplies. | Miscellaneous. | Total | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Okanagan River between Upper & Lower Okanagan Lakes | 5 | ..... | 1 | ..... | 88 | 824 | $72.50 charged against towing while only 2 hours lost towing as tugs were for various purposes and not for moving dredge. |
| Cut for Penticton Lumber Co | ..... | ..... | 5 | ..... | ..... | 17 | |
| Berth for Controlling Dam | ..... | ..... | ..... | ..... | 16½ | 33½ | |
| Totals, hours | 5 | ..... | 6 | ..... | 104½ | 874½ | |

General Remarks: Dredge put into commission at Penticton, B.C., on 1st April; laid up for season at Penticton, B.C., on December 21st to January 31st. 41 hours in April charged to Okanagan river improvement and deducted from possible dredging time.

## DREDGE, P.W.D. No. 309 ("PELICAN"), PROVINCE OF BRITISH COLUMBIA.

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September | October. | November. | December. | January. | February. | March. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 9,136 | 7,911 | | 10,154 | 8,103 | 6,129 | 5,564 | 3,132 | 4,312 | 3,911 | 4,671 | 4,605 | 67,628 |
| Class of material | Gravel. | Gravel. | | Gravel. | Gravel and sand | Sand and gravel | Gravel and clay | Clay and hardpan | Clay and sand. | Clay. | Clay and sand | Clay, sand, and gravel. | |
| Total possible dredging time | 234 | 234 | | 243 | 234 | 234 | 243 | 225 | 243 | 234 | 216 | 243 | 2,583 |
| Total time lost | 60 | 85 | | 47 | 38 | 51 | 48 | 7 | 20 | 56 | 27 | 40 | 479 |
| Hours actually dredging | 174 | 149 | | 196 | 196 | 183 | 195 | 218 | 223 | 178 | 189 | 203 | 2,104 |
| C.yds. handled per hour | 52·5 | 53 | | 51·8 | 41 | 33·5 | 28·5 | 14 | 19 | 21·9 | 24·7 | 22·6 | 32·14 |

### Details of Expenditure by Months.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 442 50 | 460 00 | | 456 28 | 440 65 | 460 00 | 460 00 | 460 00 | 460 00 | 460 00 | 460 00 | 460 00 | 5,019 43 |
| Fuel, coal, and oil | | | | | | | 40 00 | 241 00 | 210 00 | | 50 00 | | 541 00 |
| Water | | | | | | | | | | | | | |
| Subsistence | 196 00 | 178 75 | | 175 09 | 121 60 | 158 11 | 120 58 | 156 07 | 113 85 | 134 85 | 161 60 | 147 50 | 1,664 00 |
| Wharfage | | | | | | | | | | | | | |
| Pilotage | | | | | | | | | | | | | |
| Stores | | | | | | 1 25 | 1 75 | 145 00 | 52 60 | 4 00 | 10 30 | 283 46 | 521 01 |
| Repairs (Machinery | 20 40 | | 2 25 | | | | | | | | | | 9 10 |
| Repairs (General | | 0 75 | 0 40 | | 7 95 | | | | | | | | 839 90 |
| Repairs (Material | 2 50 | 199 47 | 535 93 | | 7 50 | | 94 50 | | | | | | 281 20 |
| Repairs (Wages | | | 281 20 | | | | | | | | | | 292 50 |
| Rental of Tugs | | | | 10 00 | 155 00 | 74 50 | 35 00 | | | 18 00 | | | |
| Contingencies | | | | 5 00 | | 6 25 | 3 00 | 1 50 | 0 75 | | | 2 00 | 18 50 |
| Total expenses | 661 40 | 838 97 | 819 78 | 646 37 | 732 70 | 700 11 | 754 83 | 1,003 57 | 837 20 | 616 85 | 681 90 | 892 96 | 9,186 64 |

### Details of Tug Service—Tugs in attendance and included in these operations.

| Department Tugs | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expenses. | Name of Tug. | Employed. | | Locality. | Expenses. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| | | | | | *Reliable* | July 2 | | Chase | 10 00 |
| | | | | | *Sea Tractor* | Aug. 19 | Aug. 20 | Little River to Sicamous | 90 00 |
| | | | | | *Crombie* | July 6 | | Little River | 25 00 |
| | | | | | " | Aug. 24 | Aug. 25 | Sicamous | 40 00 |
| | | | | | *Maud Annis* | Sept. 22 | | Sicamous to Little River | 62 50 |
| | | | | | *Sea Tractor* | Sept. 23 | Sept. 26 | Little River | 12 00 |
| | | | | | " | Oct. 17 | | Little River to Shuswap | 35 00 |
| | | | | | " | Jan. 19 | | Shuswap | 18 00 |
| | | | | | | | | | $292 50 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Squilax | 1,898 99 | 204 67 | ..... | 629 54 | ..... | ..... | 197 11 | 3 44 | 317 76 | 106 39 | 47 00 | 7 00 | 3,411 90 |
| Sicamous | 539 16 | 58 13 | ..... | 178 74 | ..... | ..... | 55 97 | 0 97 | 90 21 | 30 20 | 192 50 | 1 98 | 1,147 86 |
| Shuswap | 2,581 28 | 278 20 | ..... | 855 72 | ..... | ..... | 267 93 | 4 69 | 431 93 | 144 61 | 53 00 | 9 52 | 4,626 88 |
| Totals | 5,019 43 | 541 00 | ..... | 1,664 00 | ..... | ..... | 521 01 | 9 10 | 839 90 | 281 20 | 292 50 | 18 50 | 9,186 64 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost. Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| | | | | | | | $ cts. | cents. |
| Squilax | April 1 | May 31 | Gravel | 38,437 | 1,035 | 796 | 4 28 | 8·87 |
| | July 1 | Aug. 18 | | | | | | |
| | Sept. 25 | Oct. 17 | | | | | | |
| Sicamous | Aug. 19 | Sept. 24 | Sand | 7,380 | 288 | 226 | 5 07 | 15·55 |
| Shuswap | Oct. 19 | Mar 31 | Clay, sand, hardpan and gravel | 21,811 | 1,260 | 1,082 | 4 27 | 21·21 |
| Totals | | | | 67,628 | 2,583 | 2,104 | 4 36 | 13·58 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Allowing logs to pass. | Preparing to move. | Tide and Current. | Holidays. | Waiting on | | Towing, ets. | Procuring | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Squilax | 40 | 15 | 46 | 9 | ..... | 27 | ..... | ..... | 18 | 41 | ..... |
| Sicamous | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 27 | 13 | ..... |
| Shuswap | 47½ | 13 | ..... | ..... | ..... | 18 | ..... | ..... | 17 | 39 | ..... |
| Totals, hours | 87½ | 28 | 46 | 9 | ..... | 45 | ..... | ..... | 62 | 93 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Paint. | Boilers. | | | | | |
| Squilax | 11 | 14 | ..... | ..... | 9 | 230 | |
| Sicamous | 4 | 2 | ..... | ..... | 16 | 62 | |
| Shuswap | 28 | 5 | ..... | ..... | 19½ | 187 | |
| Totals, hours | 43 | 21 | ..... | ..... | 44½ | 479 | |

General Remarks: Dredge put into commission at Squilax on April 1; laid up for repairs at Chase from June 1 to June 30.

## DREDGE, P.W D No. 311 ("SHELDRAKE") PROVINCE OF BRITISH COLUMBIA

### Details of Material and Time by Months.

| Items. | April. | May. | June. | July. | August. | September. | October. | November. | December. | January. | February. | March. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cubic yards handled | 14,920 | 1,100 | ..... | ..... | ..... | 3,500 | 13,815 | 17,400 | 17,100 | 11,350 | 15,100 | 16,650 | 110,935 |
| Class of material | Sand & clay | Sand & clay | ..... | ..... | ..... | Sand ..... | Sand & clay, rocks. | Sand ..... | Sand ..... | Sand ..... | Sand ..... | Sand, clay.. | ..... |
| Total possible dredging time.....hrs | 234 | 18 | ..... | ..... | ..... | 81 | 243 | 225 | 243 | 234 | 216 | 243 | 1,737 |
| Total time lost.....hrs | 28·5 | 1 | ..... | ..... | ..... | 34 | 48·5 | 29·5 | 45·5 | 103 | 44 | 56 | 390 |
| Hours actually dredging | 205·5 | 17 | ..... | ..... | ..... | 47 | 194·5 | 195·5 | 197·5 | 131 | 172 | 187 | 1,347 |
| C.yds. handled per hour | 72·5 | 64·7 | ..... | ..... | ..... | 72·3 | 71 | 89 | 86·5 | 68 | 88 | 89 | ..... |

### Details of Expenditure by Months.

| Items of Expense. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wages | 602 78 | 38 24 | ..... | ..... | ..... | 200 67 | 580 78 | 620 00 | 620 00 | 386 64 | 605 65 | 594 49 | 4,249 45 |
| Fuel, Coal and Oil | 341 20 | 45 85 | ..... | ..... | ..... | ..... | 235 64 | 316 10 | 247 36 | 262 20 | ..... | 309 84 | 1,758 25 |
| Water | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Subsistence | 196 86 | 21 00 | ..... | ..... | ..... | 80 75 | 202 50 | 215 25 | 209 25 | 226 45 | 191 00 | 208 56 | 1,551 62 |
| Wharfage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pilotage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Stores {Machinery | 21 55 | 0 75 | ..... | ..... | ..... | 147 40 | 113 50 | 153 30 | 152 65 | 160 45 | 275 39 | 256 70 | 1,281 69 |
| Stores {General | 3 45 | ..... | ..... | ..... | ..... | 1 50 | ..... | 7 50 | 7 30 | ..... | 41 25 | 0 50 | 61 50 |
| Repairs {Material | 8 34 | 65 29 | 10 30 | 32 80 | 733 05 | 73 96 | 129 96 | 15 00 | ..... | 233 16 | 126 38 | 28 07 | 1,456 31 |
| Repairs {Wages | 17 22 | 130 57 | ..... | 68 40 | 404 00 | 268 00 | 39 22 | 4 00 | ..... | ..... | 14 35 | 25 51 | 971 27 |
| Rental of tugs | 59 00 | ..... | ..... | ..... | ..... | 30 00 | 5 00 | 30 00 | 40 00 | ..... | 20 00 | 24 00 | 208 00 |
| Contingencies | 8 50 | ..... | ..... | ..... | ..... | ..... | 6 80 | 8 31 | 18 80 | 11 90 | 4 70 | 6 40 | 65 41 |
| Total Expenses | 1,258 90 | 301 70 | 10 30 | 101 20 | 1,137 05 | 802 28 | 1,313 40 | 1,369 52 | 1,295 36 | 1,281 00 | 1,278 72 | 1,454 07 | 11,603 50 |

### Details of Tug Service—Tugs in attendance, and included in these operations.

| Department Tugs. | | | | | Rented Tugs. | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Tug. | Employed. | | Locality. | Expense. | Name of Tug. | Employed. | | Locality. | Expense. |
| | From | To | | $ cts. | | From | To | | $ cts. |
| | | | | | *Smuggler* | April 24.. | April 30.. | Columbia R. Narrows | 59 00 |
| | | | | | " | Sept. 21.. | Only | " | 30 00 |
| | | | | | C. P. R. Barge | Oct. 29.. | " | " | 5 00 |
| | | | | | *Smuggler* | " 19.. | Oct. 21.. | " | 30 00 |
| | | | | | " | Dec. 10.. | Dec. 14.. | " | 40 00 |
| | | | | | " | Feb. 2.. | Only | " | 20 00 |
| | | | | | *Killarney* | Mar. 23.. | " | " | 24 00 |

DETAILS OF EXPENSES AND RESULTS OBTAINED AT POINTS OF WORK.

| Expenses Working at | Wages. | Fuel. | Water. | Subsistence. | Wharfage. | Pilotage. | Stores. | | Repairs. | | Rental Tugs. | Contingencies. | Total Expenses. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Machinery. | General. | Material. | Wages. | | | |
| | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. | $ cts. |
| Graham's Ldg. | 3,392 31 | 1,402 91 | ..... | 1,238 04 | ..... | ..... | 1,022 66 | 49 07 | 1,161 99 | 774 98 | 158 00 | 52 19 | 9,252 15 |
| Above Rock Slide. Columbia River Narrows. | 606 41 | 209 41 | ..... | 184 80 | ..... | ..... | 152 65 | 7 32 | 173 45 | 115 68 | 20 00 | 7 79 | 1,377 51 |
| Below Rock Slide.. | 228 66 | 118 33 | ..... | 104 43 | ..... | ..... | 86 16 | 4 14 | 98 00 | 65 37 | ..... | 4 30 | 709 39 |
| Nakusp | 122 07 | 26 60 | ..... | 24 35 | ..... | ..... | 20 22 | 0 97 | 22 87 | 15 24 | 30 00 | 1 13 | 264 45 |
| Totals | 4,249 45 | 1,758 25 | ..... | 1,551 62 | ..... | ..... | 1,281 69 | 61 50 | 1,456 31 | 971 27 | 208 00 | 65 41 | 11,603 50 |

| Expenses Working at | Time Working. | | Kind of Material. | No. C. Yds. Moved. | Possible Work Hours. | Actual Work Hours. | Hour-Cost Actually Dredging. | Cost per Cubic Yard. |
|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | |
| Graham's Ldg. | April 1 | May 2 | Sand and clay | 86,155 | 1,386 | 1,058 | $8·745 | $0·1074 |
| | Sept. 23 | Oct. 18 | | | | | | |
| | Oct. 22 | Feb. 1 | | | | | | |
| | Mar. 16 | Mar. 31 | | | | | | |
| Above Rock Slide Columbia River Narrows. | Feb. 2 | Mar. 1 | Sand | 15,100 | 207 | 172 | 8·009 | 0·0912 |
| Below Rock Slide | Mar. 1 | Mar. 15 | " | 9,650 | 117 | 108 | 6·568 | 0·0735 |
| Nakusp | Oct. 19 | Oct. 21 | Rock | 40 | 27 | 9 | 29·380 | 6·6112 |
| Totals | | | | 110,935 | 1,737 | 1,347 | 8·614 | 0·1046 |

EXPLANATION OF UNAVOIDABLE LOSS OF TIME.

| Time Lost at | Repairs. | Moving Dredge. | Storms and Weather. | Fog. | Tide and Current. | Holidays. | Waiting on | | Towing, etc. | Procuring. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scows, tugs. | Orders. | | Fuel. | Water. |
| Graham's Ldg. | 152 | 10·5 | 1 | ..... | ..... | 36 | 9 | ..... | 71 | 9·5 | ..... |
| Above Rock Slide | 5 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | 21 | ..... | ..... |
| Below Rock Slide | 1 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Nakusp | ..... | ..... | ..... | ..... | ..... | ..... | 13·5 | ..... | ..... | ..... | ..... |
| Totals, hours | 158 | 22·5 | 1 | ..... | ..... | 36 | 22·5 | ..... | 92 | 9·5 | ..... |

| Time Lost at | Cleaning. | | Inspecting Boilers. | Short Supplies. | Miscellaneous. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Plant. | Boilers. | | | | | |
| Graham's Ldg. | 19 | 7 | ..... | ..... | 13 | 328 | Excessive repairs in January due boiler tubes leaking. |
| Above Rock Slide | 3 | ..... | ..... | ..... | ..... | 35 | |
| Below Rock Slide | 2 | ..... | ..... | ..... | ..... | 9 | |
| Nakusp | ..... | ..... | ..... | ..... | 4·5 | 18 | |
| Totals, hours | 24 | 7 | ..... | ..... | 17·5 | 390 | |

Dredge put into commission at Graham's Ldg. on April 1, 1914; ended for season at Graham's Ldg. on March 31, 1915.

General Remarks: Yardage removed was 37,435 cu. yds. above estimated capacity, due to soft nature of ground encountered and improvements made in plant. The duty of this dredge the maintenance of channel through Narrows between Upper and Lower Arrow Lakes, a distance of 17½ miles, on the main route of travel to and from south-eastern portion of British olumbia.

Material was overcast as water was too shallow to allow use of dump scow.

## CONTRACT DREDGING, 1914.

*Algoma Central Slip, Sault Ste. Marie, Ont.*—Under contract No. 8960. (See also Main Channel Sault Ste. Marie work done under same contract) with Soo Dredging and Construction Company.
Dredges: No. 3, No. 8, and Derrick.
Quantity removed: 2,864 A cubic yards, place measurement at $3.47 A per cubic yard, class A; 4,469 B cubic yards, place measurement, at 92 cents per cubic yard, class B, rock, boulders, mud and sand.
Amount passed for payment, $12,172.58.
Inspection: Included with Sault Ste. Marie Main Channel.
Work resumed: April 24, 1914.
Suspended for season: December 31, 1914.
Object of work: To provide slip at foot of Elgin street and west side of New Ontario dock to 21½ feet.

*Amherst, Que.*—J. T. Bertrand, Dist. Eng. Day labour.
Amount passed for payment: $411.20; work commenced, November, 1914; completed November, 1914.
Object of work: drilling and blasting rock.

*Beacon Bar, St. John Harbour, N.B.*—Under contract No. 7304 extension, with Maritime Dredging and Construction Company. Dredges *Beaver, Cynthia, Iroquois, St. John.*
Quantity removed: 1,533,017·7 cubic yards. Scow measurement, at 39½ cents and 34 cents per cubic yard, Class B.
Amount passed for payment: $541,357; inspection and surveys, $18,407.55; total expenditure, $559,764.55.
Work commenced: April 1, 1914; suspended for season, March 31, 1915.
Object of work: Continuation of harbour improvements; shelter basin at wharfs and berths.

*Boar's Head, N.B., (Rivers Mills).*—Under contract No. 9496 extension, with New Brunswick Construction Co. Dredge *New Brunswick No. 1.*
Quantity removed: 4,099·8 cubic yards, scow measurement, at 26 cents per cubic yard. Class B, mud, clay, sawdust and timber and stone.
Amount passed for payment: $1,065.94; inspection $48; total expenditure, $1,113.94.
Work resumed: April 20, completed April 30, 1914.
Object of work: Completion of removal of old wharfs and breakwater which lie below water level.

*Bathurst, N.B.*—Under contract No. 9483, extension, with Northern Dredging and Construction Co., Ltd. Dredges *Hayward, Invader and Gray Loggie.*
Quantity removed: 190,620 cubic yards, place measurement, at 25 cents per cubic yard. Class B, sand and mud.
Amount passed for payment: $49,561.20 (including $1,906.20 for extra haul); inspection, $2,148.92; total expenditure, $51,710.12.
Work resumed. May 20, 1914; completed August 20, 1914.
Object of work: To provide channel 200 feet wide in Inner Harbour to 17 feet.

*Bathurst, N.B.*—Under contract No. 10158, with Northern Dredging and Construction Co., Ltd. Dredges *Hayward, Invader, Gray Loggie, Stephen "D."*
Quantity removed: 199,828 cubic yards, place measurement, at 30 cents per cubic yard. Class B, sand and mud.

Amount passed for payment: $62,675.96 (including charge for extra haul, $2,727.56); inspection, $2,157.16; total expenditure, $64,833.12.
Work commenced: August 24, 1914; suspended for season, November 28, 1914.
Object of work: Dredging outer entrance channel.

*Batiscan River, Que.*—Under agreement with F. C. Burns. Dredge: *Capital.*
Quantity removed: 23,734 cubic yards, scow measurement, at 15 cents per cubic yard. Class B, sand and clay.
Amount passed for payment, $3,560.10; inspection and survey, $904.81; total expenditure, $4,464.91.
Work commenced 20th May; completed 10th August, 1914.
Object of work: Dredging to maintain channel to Government wharf by dredging shoals to 6 feet and 2,256 cubic yards removed at ferry.

*Belleville, Ont. (Holton's wharf).*—Under agreement with Randolph Macdonald Co. Dredge *No. 5.*
Quantity removed: 1,397 cubic yards, place measurement, at 30 cents per cubic yard Class B, loose rock.
Amount passed for payment, $419.10.
Work commenced 21st May, 1914; completed 29th June, 1914.
Object of work: To dredge basin between Holton Lumber Co. and Allan Coal Co. wharfs to 12 feet.

*Black River, N.B.*—Under agreement with Felix Michaud. Dredge *Excavator.*
Quantity removed: 1,996.8 cubic yards, scow measurement, at 36 cents per cubic yard, class B, sand, shells, clay and stone.
Amount passed for payment, $718.85; inspection, $45.75; total expenditure, $764.60.
Work resumed 27th May, 1914; work completed, 16th June, 1914.
Object of work: Dredging channel to Government wharf, 1,300 by 30 to 4 feet.

*Brockville, Ont.*—Under agreement with R. Weddell & Co. Dredge *Togo.*
Quantity removed: 285 cubic yards, scow measurement, at 85 cents per cubic yard, class B, rock and hardpan blown.
Amount passed for payment, $242.25; balance on account operations 1913, $107.31; total expenditure, $349.56.
Work commenced 26th August, 1914; completed 26th August, 1914.
Object of work: Removal of rock shoal to 14 feet.

*Burk's Falls, Ont.*—Under days' labour.
Amount passed for payment, $3,249.49.
Object of work: Removal of obstacles in Magnetewan river.

*Beauport, Que.*—Under contract No. 10231 with W. J. Poupore Co., Ltd. Dredges. *Duke of York, Prince Guy,* and *Prince Willie.*
Quantity removed: 23,236 cubic yards, place measurement, at 30 cents per cubic yard. class "B," mud, sand and boulders.
Amount passed for payment, $6,970.80; inspection, $553.95; total expenditure, $7,524.75.
Work commenced July 2, 1914.
Suspended for season November 18, 1914.
Object of work: Dredging basin 1,200 by 200 feet on east side to 4 feet above low water.

*Blind River, Ont.*—Under contract No. 8884 with C. S. Boone Dredging and Construction Co., Ltd.
Amount passed for payment, $1,157.49 to pay drawback of 1913.
Completed August 30, 1913.

*Buctouche Beach, N.B.*—Under agreement with Felix Michaud, dredge *Excavator.*
Quantity removed: 14,338·5 cubic yards, scow measurement, at 36 cents per cubic yard, class "B," sand and clay.
Amount passed for payment, $5,000; inspection, $256.88; total expenditure, $5,256.88.
Work commenced, July 14; completed, November 3, 1914.
Object of work: redredging channel 1,100 by 40 feet to Buctouche Beach canal to 3 feet.

*Becancourt, Que.*—Under agreement with Antoine St. Pierre, dredge *St. Pierre.*
Quantity removed: 17,814 (hauled), scow measurement; 1,794 (cast over), place measurement, at 18 cents and 12 cents per cubic yard, class "B," sand and clay.
Amount passed for payment, $3,421.80; inspection, $141.40; total expenditure, $3,563.20.
Work commenced, August 3; completed September 7, 1914.
Object of work: Dredging channel 1,000 by 50 feet to public wharf from St. Lawrence to 7 feet.

*Barnaby River, N.B.*—See southwest Miramichi.

*Bergeronnes, Que.*—Under agreement by P. E. Amiot, District Engineer. Day labour.
Amount passed for payment, $409.08.
Work commenced July, 1914; suspended for season, August, 1914.
Object of work: Dredging tidal basin at mouth of river to 7 feet.

*Bonshaw, P.E.I.*—Under agreement by Mr. W. E. Hyndman, District Engineer. Day labour.
Amount passed for payment, $252.01.
Work commenced: October, 1914; completed, November, 1914.
Object of work: Improvement of channel by removal of logs, snags, stumps and slabs.

*Charlottetown, P.E.I. (Southport).*—Under contract No. 10015, with V. T. Bertram. Dredges *McDougal, and Edmund Hall No. 1.*
Quantity removed: 48,770 cubic yards, place measurement, scowed, at 28 cents per cubic yard, class "B." 4,204 cubic yards, place measurement, cast over, at 18⅝ cents cast over per yard, class "B." Mud and sand (1 cent extra for over tow on 44,269.7 cubic yards).
Amount passed for payment, $14,883.05; inspection, $329.70; total expenditure, $15,212.75.
Work commenced: October 15; suspended for season, December 16, 1914.
Object of work: Dredging approach to and foundation for proposed Marine railway.

*Cobourg, Ont.*—Under agreement with R. Weddell & Co., Ltd., dredge *Togo.*
Quantity removed: 9,007 cubic yards, scow measurement at 20 cents per cubic yard, class "B." sand.
Amount passed for payment, $1,801.40; inspection, $51.40; total expenditure, $1,852.80.
Work commenced, July 23; completed, August 6, 1914.
Object of work: Deepening inner harbour 600 feet by 140 feet to 16 feet.

*Cole's Island, N.B.*—Under agreement with St. John River Dredging and Construction Co., Ltd. Dredge *Tantawanta.*
Quantity removed: 2,380·4 cubic yards, scow measurement at 22½ cents per cubic yard, class "B," clay and rock.
(Removal of wreckage, 23½ hours at $9.47 per hour.)
Amount passed for payment, $758.14; inspection, $45; total expenditure, $803.14.
Work commenced September 3; completed, September 18, 1914.
Object of work: dredging basin in front of wharf to 9 feet

*Coldwater, Ont.*—Under agreement by Mr. Armstrong, district engineer, day labour.
Amount passed for payment, $450.37.
Work commenced, October 1, 1914; completed, November 5, 1914.
Object of work: dredging channel from Grand Trunk Railway bridge to Sturgeon Bay bridge, 3,172 by 30 feet to 6 feet.

*Digby, N.S.*—Raquette and Channel to Pier. Under contract No. 9556, extension, with the Maritime Dredging and Construction Co., Ltd. Dredges *Iroquois* and *Beacon Bar.*
Quantity removed: At pier, 100,004·1 cubic yards, scow measurement, 24½ cents per cubic yard, class "B"; at Raquette, 16,481 cubic yards, place measurement, 59 cents cubic yard, class "B," mud, clay, sand and stone.
Amount passed for payment, $34,224.80; inspection, $440.30; total expenditure, $34,665.10.
Work resumed July 6; completed August 31, 1914.
Object of work: Improvement at Government Pier and in the Raquette.

*Dalhousie, N.B.*—Under contract No. 9997, extension with the Northern Dredging and Construction Co., Ltd. Dredge *Gray Loggie.*
Quantity removed: 319·8 cubic yards, place measurement at $5 per cubic yard, class A; 88·8 cubic yards, place measurement, at 30 cents per cubic yard, class B, mud, clay and rock.
Amount passed for payment, $1,625.64.
Work resumed June 24; suspended for season, July 7, 1914.
Object of work: Dredging loading berth at Lumber Company wharf.

*Dalhousie, N.B.*—Under agreement with The Northern Dredging and Construction Co., Ltd., dredge *Gray Loggie.*
Quantity removed: 2,974·8 cubic yards, scow measurement, at 29½ cents per cubic yard, class "B,"mud and clay.
Amount passed for payment, $877.58.
Work commenced June 15; completed June 23, 1914.
Object of work: Dredging basin between ferry wharf and new breakwater to 15 feet.

*Dunham's Wharf, N.B.*—Under agreement with The New Brunswick Dredging and Construction Co., Ltd., dredge *New Brunswick No. 1.*
Quantity removed: 686 cubic yards, place measurement, at 28 cents per cubic yard, class 'B," gravel and mud.
Amount passed for payment, $102.08 inspection, $14.40; total expenditure, $206.48.
Work commenced July 21, 1914; completed, July 29, 1914.
Object of work: Dredging channel to and berth in front of wharf to 9 feet.

*Douglas Harbour, N.B.*—Under agreement with St. John River Dredging and Construction Company, dredge *"Tantawanta."*
Quantity removed: 4,954 cubic yards, place measurement, at 35 cents per cubic yard, class "B," clay and gravel.
Amount passed for payment, $1,733.90; inspection, $37.92; total expenditure, $1,771.82.
Work commenced November 9; suspended for season, November 18, 1914.
Object of work:—Dredging basin 340 feet by 272 feet to depth of 9 feet below low water.

*Doucet's Landing, Quebec.*—Under agreement with F. C. Burns, dredge *Capital.*
Quantity removed: 2,449 cubic yards, scow measurement, at 41 cents per cubic yard, class "B," 11 cubic yards, scow measurement, at $1 per cubic yard, class "A," boulders and hardpan.

Amount passed for payment, $1,015.09; inspection, $152.30; total expenditure, $1,167.39.
Work commenced November 27; suspended for season, December 9, 1914.
Object of work: Dredging under entrance to Grand Trunk Railway Dock, to 12 feet

*Dartmouth, N.S.*—Under agreement with Nova Scotia Dredging Company, Limited. Dredges *Prince Louis* and *Ajax H.*
Quantity removed: 1,424 cubic yards, scow measurement, at 26 cents cubic yard, class "B," hardpan and mud.
Amount passed for payment, $2,970.24; inspection, $218; total expenditure, $3,188.24.
Work commenced December 31, 1914; suspended for season, March 31, 1915.
Object of work: Dredging at Ferry Wharfs, 14 feet and 20 feet low water.

*False Creek, B.C.*—Under contract No. 9493 extension with Pacific Dredging Company, Limited. Dredges *No. 1* and *Robson.*
Quantity removed: 876,098 cubic yards, place measurement, at 21 cents per cubic yard, class "B," mud, sand, gravel, boulders and shells.
Amount passed for payment, $183,980.58; inspection, $13,543.83; total expenditure, $197,524.41.
Work resumed, April 1, 1914; suspended for season, March 31, 1915.
Object of work: Deepening from English Bay to Main Street Bridge.

*Fraser River, Sand Heads, B.C.*—Under contract No. 9964 with Navigation Dredging Company, Ltd. Dredge *P. D. C. No. 4.*
Quantity removed (including 892 cubic yards in January, 1913): 3,493 cubic yards, scow measurement, at 23½ cents per cubic yard, class "B," sand and clay.
Amount passed for payment, $820.86.
Work commenced, April 2; completed, April 23, 1914.
Object of work: maintenance of depth of sand heads controlling entrance to Fraser ports.

*Foul Ground, St. John Harbour, N.B.*—Under contract No. 9426, extension with the Maritime Dredging and Construction Co., Ltd.
Quantity removed: 34·3 cubic yards, scow measurement, at $6.90 per cubic yard, class "A"; 11,271·8 cubic yards, scow measurement, at 49½ cents per cubic yard, class "B," clay, stones, mud and boulders.
Amount passed for payment, $5,816.21; surveys, $209.50; total expenditure, $6,025.71.
Work resumed, June 16, 1914; suspended for season, February 20, 1915.
Object of work: Maintenance of channel, removing material overlying ledge rock at point of Foul Ground, main entrance, St. John Harbour.

*Fort William, Ont.*—Under contract No. 7170, (G. T. P. Basin), with Great Lakes Dredging Company, Ltd. Dredges *Frank, No. 7, Empire, Imperial, Joubert, Dominion, No. 15.*
Quantity removed: 897,109 cubic yards, scow measurement at 16 cents, 17 cents and 18½ cents per cubic yard, class "B," including charge for over-haul; sand, clay, boulders and hardpan.
Amount passed for payment, $153,856.10; inspection, $6,645; total expenditure, $160,501.10.
Work resumed May 9, suspended for season December 7, 1914.

*Fort William, Ont., Kaministiquia and Mission Rivers.*—Under contract No. 7339, with Great Lakes Dredging Company, Ltd. Dredges *Dominion, No. 8, Frank, No. 5, Joubert, Imperial, No. 7, Empire.*
Quantity removed: 1,832,689 cubic yards, scow measurement at 11¼ cents to 26½ cents per cubic yard, class "B," including charge for extra haul, clay, sand and gravel.

Amount passed for payment, $316,862.87;
Inspection, see Contract No. 7170.
Work resumed May 8, 1914; suspended for season, December 10, 1914.

*Fredericton, N.B.*—Under contract No. 8922, extension, with The New Brunswick Construction Company, Ltd. Dredges *New Brunswick No. 1 and Tantawanta.*
Quantity removed: 27,971·7 cubic yards, scow measurement, at 23 cents per cubic yard, class "B," mud, sand and gravel.
Amount passed for payment, $6,433.49; inspection, $259.29; total expenditure, $6,692.78.
Work resumed July 31, completed August 22, 1914.
Object of work: To provide channel below railway bridge to various wharfs along river front and also turning basin.

*Goat Island, Ont.*—*See* Little Current.

*Goderich, Ont.*—Under contract No. 10179 with Jennings & Ross. Dredges *Goderich, Jack Canuck,* and *Meneselung.*
Quantity removed: 93,679 cubic yards, scow measurement, at 16 cents per cubic yard, class "B," clay, sand, gravel and hardpan.
Amount passed for payment, $14,968.64; inspection, $857; total expenditure, $15,845.64.
Work commenced, June 8; suspended for season, October 19, 1914.
Object of work: to maintain entrance channel and enlarging turning basin to 21 and 22 feet.

*Grimross Canal, N.B.*—Under agreement with the New Brunswick Dredging and Construction Co., Ltd. Dredges *New Brunswick No. 1* and *Tantawanta.*
Quantity removed: 15,631·4 cubic yards, place measurement, at 21½ cents per cubic yards, class "B," clay.
Amount passed for payment, $3,360.75; inspection, $71.30; total expenditure, $3,432.05.
Work commenced, October 27; suspended for season, November 15, 1914.
Object of work: Dredging to 11 feet below low water channel 2,000 by 150 feet.

*Germain Street Slip, St. John Harbour, N.B.*—Under agreement with the Maritime Dredging and Construction Co., Ltd. Dredge *Beacon Bar.*
Quantity removed: 909·1 cubic yards, scow measurement, at 75 cents per cubic yard, class "B," mud, gravel and timber.
Amount passed for payment, $681.83.
Work commenced, November 17, 1914; completed, December 2, 1914.
Object of work: Dredging berthing space between wharfs sloping from 7 feet above low water to 12 feet above low water.

*Grandigue, N.B.*—Under agreement by Mr. G. Stead, district engineer.
Amount passed for payment, $980.13; inspection, $67.81; total expenditure, $1,047.94.
Work commenced, October, 1914; completed, November 13, 1914.
Object of work: Dredging approach channel 480 by 40 feet, and berths to 4 feet.

*Honey Harbour, Ont. (Big Dog Channel).*—Under agreement with William McClinchey.
Quantity removed: 427·22 cubic yards, place measurement, at $8 per cubic yard, class "A," rock.
Amount passed for payment, $3,417·76; inspection, $320.15; total expenditure, $3,737.91.
Work commenced May 28; completed August, 1914.
Object of work: Improving and straightening channel 115 feet by 30 feet to 5 feet.

*Holton's Wharf.—See* Belleville, Ont.

*Hoollyburn, B.C.*—Under agreement with J. W. Pyke; dredge *Beaver No. 4.*

Quantity removed: 2,769 (hauled), 1,704 (cast-over) cubic yards, place measurement, at 30 cents and 20 cents per cubic yard, class "B," sand and gravel.
Amount passed for payment, $1,171.50; inspection, $268.45; total expenditure, $1,439.95.
Work commenced August 13, 1914; completed October 1, 1914.
Object of work: Dredging basin on south east side of wharf.

*Humphrey's, N.B.*—Under agreement with St. John River Dredging and Construction Company; dredges *New Brunswick No. 1,* and *Tantawanta.*
Quantity removed: 12,048·7 cubic yards, scow measurement, at 22½ cents per cubic yard, class "B," mud, sand and clay.
Amount passed for payment, $2,710.96; inspection, $72.50; total expenditure, $2,783.46.
Work commenced August 26; completed October 27, 1914.
Object of work: dredging basin at wharf to 9 feet.

*Killarney, Ont.*—Under contract No. 9730, extension with the C. S. Boone Dredging and Construction Co., Ltd. Dredge *Kingsford.*
Quantity removed: 5,950 cubic yards, place measurement, at 32 cents per cubic yard, class "B," clay.
Amount passed for payment, $1,904; inspection and surveys, $312.11; total expenditure, $2,216.11.
Work commenced, August 24; completed September 3, 1914.
Object of work: deepening channel entrance, 1,700 by 150 feet through shoal at mouth of Killarney Channel to 16 feet.

*Kaministiquia and Mission Rivers.*—See Fort William, Ont.

*Kingston, Ont.*—7,916 cubic yards foot of Bay and Princess streets, 24 cents; 303·11 cubic yards, Richardson's elevator, 40 cents. Under agreement with R. Weddell & Co. Dredge *Togo.*
Quantity removed: 8,219 cubic yards, place measurement, at 24 cents and 40 cents per cubic yard, class "B," clay.
Amount passed for payment, $2,021.04.
Work commenced, August 12, 1914; completed, September 2, 1914.
Object of work: Dredging basin between wharfs to 14 feet.

*Little Black River, N.B.*—Under contract No. 9508, extension with F. A. Fowlie. Dredge *Fowlie.*
Quantity removed: 14,815·76 cubic yards, scow measurement, at 35 cents per cubic yard, class "B." mud.
Amount passed for payment, $5,185.51; inspection, $271; total expenditure, $5,456.51.
Work resumed, July 2, 1914; completed, November 14, 1914.
Object of work: Dredging channel and turning basin above and below bridge to 2 feet and 5 feet.

*Little Current, Ont. (Goat Island).*—Under contract No. 9589, extension, with Soo Dredging and Construction Company, Ltd.; dredge *Excelsior* and drill boat *Rock King.*
Quantity removed: 29,782 cubic yards, place measuremnet at $2.90 per cubic yard, class "A"; $2.60 per cubic yard, cast-over, limestone.
Amount passed for payment, $85,813.70; inspection and surveys, $2,985.92; total expenditure, $88,799.62.
Work commenced June 20; suspended for season, December 15, 1914.
Object of work: Dredging approaches to the A. E. railway wharfs and widening channel 2,534 feet by 150 feet to 22 feet.

*Levis Graving Dock, Quebec.*—Under agreement with La Compagnie Sable Union, J. L. Lachance; dredge *Clam Shell No. 2.*
Quantity removed: 1,236·25 cubic yards, scow measurement, at 60 cents per cubic yard, class "B," mud.
Amount passed for payment, $741.60.
Work commenced June 3, 1914; completed September 10, 1914.
Object of work: Dredging accumulated mud at entrance to dock.

*Little Harbour, N.S.*—Under agreement with Nova Scotia Dredging Company, Ltd.; dredge *Ajax H.*
Quantity removed: 11,912·03 cubic yards, scow measurement at 39 cents per cubic yard, class "B," sand and mud. (3,375·03 cubic yards at 29 cents cast over).
Amount passed for payment, $4,308.19; inspection, $113.59; total expenditure, $4,421.78.
Work commenced August 27; completed, October 8, 1914.
Object of work: Providing safe anchorage for fishermen.

*Lower St. Louis, N.B.*—By G. Stead, district engineer. Day labour.
Quantity removed: 4,841 cubic yards, scow measurement.
Amount passed for payment, $1,005.42.
Work commenced July, 1914; completed, September, 1914.
Object of work: Dredging river channel 40 feet wide to 3 feet at low water.

*Little Aldouane, N.B.*—Under agreement with Geo. C. Daigle; dredge *St. Charles.*
Quantity removed: 252·9 cubic yards, scow measurement at 35 cents per cubic yard, class "B," mud.
Amount passed for payment, $88.52; inspection, $11.60; total expenditure, $100.12.
Work commenced November 6; completed November 11, 1914.
Object of work: Dredging cut in river channel and shoal spots at public wharf to 4 feet.

*Little Harbour, N.S.*—Under agreement by W. P. Morrison, district engineer.
Amount passed for payment, $1,753.30.
Work commenced October, 1914; completed, December, 1914.
Object of work: To provide shelter and harbourage 700 feet by 50 feet.

*Murray Harbour, P.E.I.*—Under contract No. 9444, extension, with V. T. Bartram; dredge *Edmund Hall No. 1.*
Quantity removed: 36,098·6 cubic yards, scow measurement, at 24 cents per cubic yard, class "B," gumbo, mud and sand.
Amount passed for payment, $8,663.66; inspection, $169.80; total expenditure, $8,833.46.
Work resumed May 12; completed, June 5, 1914.
Object of work: Widening and deepening entrance channel 80 feet wide to 10 feet.

*Hill Cove, N.S.*—Under agreement with Halifax Dredging Company, Limited; dredge Ferguson.
Quantity removed: 5,913¾ cubic yards, scow measurement, at 29 cents per cubic yard, class "B," hard pan.
Amount passed for payment, $1,714.99.
Work commenced May 14, 1914; completed, June 17, 1914.
Object of work: Deepening the cove for shipping to 18 feet below low water.

*Maquapit and French Lakes, N.B.*—Under Contract No. 10182, with The New Brunswick Construction Company, Ltd.; dredges *New Brunswick No. 1* and *Tantawanta.*
Quantity removed: 34,428 cubic yards, place measurement, at 20 cents per cubic yard, class "B," clay, sand and mud.
Amount passed for payment, $6,885.60; inspection, $203.41; total expenditure, $7,089.01.

Work commenced May 25, 1914; suspended for season, June 30, 1914.
Object of work: Dredging entrance channel 2,640 feet by 75 feet into lake from Grand Lake to 7 feet.

*Millerton, N.B.*—Under agreement Peter England; Extract Co., wharf, 297·1 cubic yards; Pulp and Paper Co., wharf, 131·1 cubic yards; total, 428·2 cubic yards, with dredge *Peter England.*
Quantity removed: 428·2 cubic yards, place measurement, at 55 cents per cubic yard, class "B," clay, sand and mud.
Amount passed for payment, $235.51; inspection, $13.50; total expenditure, $249.01.
Work commenced, June 30; completed July 4, 1914.
Object of work: Dredging berth 218 feet long at wharf to allow scows to unload. Depth 5 feet.

*Margaree Harbour, N.S.*—Under contract No. 10324, with V. T. Bartram; dredge *E. Hall No. 1.*
Quantity removed: 22,640·14 cubic yards, scow measurement, at $5 per cubic yard, class "A," and 55 cents per cubic yard, class "B;" wreckage, $1.10—wreckage, sand, gravel, boulders and wrecked breakwater.
Amount passed for payment, $12,364.60; inspection, $210.33; total expenditure, $12,574.93.
Work commenced August 29; completed, October 17, 1914.
Object of work: Dredging channel through shoal and outer entrance channel to 8 feet.

*Maxwell Islands, Ont., Whalen's Shoal.*—Under private agreement with Wm. Carson of Midland.
Quantity removed: 23 cubic yards, place measurement, class "A."
Amount passed for payment, $200.
Work commenced July 28; completed August 15.
Object of work: Removing rock shoal at east side of steamboat channel.

*McKellar River, Ont.—Fort William.*—Under contract No. 8787, extension with Great Lakes Dredging Co., Ltd. Dredges *No. 1, No. 6, No. 15* and *No. 8.*
Quantity removed: 751,944 cubic yards, place measurement, at 17¼ cents per cubic yard, class "B," at $3.85 cents per cubic yard, class "A," clay, sand, glacial drift, hard-pan and boulders (311 cubic yards, class "A.")
Amount passed for payment, $160,783.44; inspection, $369.65; total expenditure, $161,153.09.
Work resumed, May 8; completed, December 10, 1914.
Object of work: Dredging channel 400 feet in McKellar river to 25 feet.

*McKellar River, Ont.—Fort William.*—Under contract No. 10298 with Great Lakes Dredging Co. Dredges *No. 8, No. 5, No. 15,* and *Dominion.*
Quantity removed: 144,239 cubic yards, place measurement, at 23 cents per cubic yard, class "B," clay and sand.
Amount passed for payment, $37,502.14.
Work commenced, October 23; completed, December 11, 1914.
Object of work: Widening channel to 500 feet to depth of 25 feet.

*McDonald's Point, N.B.*—Under agreement with New Brunswick Construction Co., Ltd. Dredge *New Brunswick No. 1* and *Tantawanta.*
Quantity removed: 14,200·6 cubic yards, scow measurement at 28 cents per cubic yard, class "B," mud.
Amount passed for payment, $3,976.17; inspection, $63.76; total expenditure, $4,039.93.
Work commenced, September 24; completed, October 31, 1914.
Object of work: Dredging basin in front of wharf to 9 feet below low water.

Dredge "Mastodon", No. 306, First Narrows, Vancouver, B.C.

*Northwest Miramichi River, N.B.*—Under contract No. 9565, extension with Peter England.

Quantity removed: 14,004·3 cubic yards, scow measurement, at 37 cents per cubic yard, class "B," gravel, sand, stone and refuse.

Amount passed for payment, $5,181.59; inspection and surveys, $233.88; total expenditure, $5,415.47.

Work resumed July 9; completed September 29, 1914.

Object of work: completion of channel through shoals 100 feet wide to 5 feet.

(Dredge: *Peter England.*)

*Nelson and Wellington Slips and Navy Island Bar, West St. John, N.B.*—Under contract No. 9610, extension with Maritime Dredging and Construction Co., Ltd.; dredge: *Beacon Bar.*

Quantity removed: 8,751 cubic yards, place measurement, at 34½ cents per cubic yard. Class "B," sand and mud.

Amount passed for payment, $3,019.10.

Work resumed June 5; completed September 24, 1914.

Object of work: Deepening berths of schooners at Slips. Removal of foot of Navy Island Bar to shorten ferry route.

*Nanaimo, B.C.*—Under contract No. 10201, with Pacific Dredging Company; dredge, *Robson.*

Quantity removed: 117,715 cubic yards, place measurement, at 23½ cents per cubic yard; class "B," sand and clay.

Amount passed for payment, $27,663.02.

Work commenced June 29; completed September 16, 1914.

Object of work:—Improving entrance channel to harbour, widening and deepening to 30 feet.

*Notre Dame de Pierreville, Que.*—Under District Engineer Sabourin. Day labour.

Amount passed for payment, $580.

Object of work:—Removing castover on both sides of channel.

*Oak Point, N.B.*—Under contract No. 9817, with Maritime Dredging and Construction Company, Ltd.; dredge *New Brunswick No. 1.*

Quantity removed: 41,200 cubic yards, place measurement, at 19½ cents per cubic yard, class "B," mud, clay and stones.

Amount passed for payment, $8,034; inspection, $141.09; total expenditure, $8,175.09.

Work commenced May 2; completed July 24, 1914.

Object of work: Dredging basin in front of wharf to 11 feet.

*Orillia, Ont.*—Day labour.

Removal of old cribs, $85; amount passed for payment, $85.

*Pitt River, B.C.*—Under contract No. 9587, extension with Pacific Dredging Co., Ltd.; dredges *Robson* and *No. 1.*

Quantity removed: 474,328 cubic yards, place measurement, at 18 cents per cubic yard, class "B," sand.

Amount passed for payment, $85,379.04; inspection, $704.20; total expenditure, $86,083.24.

Work resumed April 1, 1914; completed October 12, 1914.

Object of work: Dredging channel 6,200 by 300 feet through bar obstructing entrance to 25 feet.

*Powell River, B.C.*—Under contract No. 10045 with Pacific Dredging Co., Ltd.; dredge *Pudget Sound.*

Quantity removed: 72,130 cubic yards, place measurement, at 44 cents per cubic yard, class "B," silt and sand.

Amount passed for payment, $31,737.20; inspection, $164.05; total expenditure, $31,901.25.

Work commenced April 1, 1914; completed May 13, 1914.

Object of work: Dredging basins alongside wharfs to 15 feet and 25 feet.

*Powell River, B.C.*—Under agreement with Pacific Dredging Co. Dredge *Beaver No. 2.*

Quantity removed: 8,000 cubic yards, place measurement, at 44 cents per cubic yard, class "B," sand and boulders.

Amount passed for paymeut, $3,520.

Work commenced June 30, 1914; completed July 27, 1914.

Object: Extension to contract 10045.

*Port Arthur, Ont.*—Under contract No. 9490, extension with W. E. Phin; dredge, *Kennequhair.*

Quantity removed: 416,410 cubic yards, scow measurement, at 13 cents per cubic yard. Class "B," sand and clay.

Amount passed for payment, $54,133.30; inspection and surveys, $570.40; total expenditure, $54,703.70.

Work resumed May 11; completed September 30, 1914.

Object of work: Canadian Northern Railway coal docks, widening harbour 4,700 by 300 feet to 25 feet.

*Picnic Island, Ont.*—Under contract No. 7816, extension with C. S. Boone Dredging and Construction Company, Limited; dredge *Kingsford,* and *Derrick Scow No. 1,* and *Charles Boone.*

Quantity removed: 45,903 cubic yards, scow measurement, at $1.70 per cubic yard. Class "A," limestone rock.

Amount passed for payment, $78,035.10; inspection and surveys, $2,952.17; total expenditure, $80,997.27.

Work commenced May 12; suspended for season November 3, 1914.

Object of work: Improvement of channel dredging 5,000 by 300 feet through shoal in steamer track opposite Picnic island to 22 feet.

*Petit de Grat, N.S.*—Under contract No. 9637, extension, with Coastal Dredging and Construction Company, Ltd.; dredge *Cadeco No. 2.*

Quantity removed: 10½ cubic yards, class "A," rock; 12,884 cubic yards, class "B," scow; 775 cubic yards, castover measurement at $5, class "A," 54 cents; class "B," 36 cents, castover, rock and gravel.

Amount passed for payment, $7,267.26; inspection, $141.60; total expenditure, $7,408.86.

Work resumed June 6; completed July 22, 1914.

Object of work: Dredging channel to wharfs to 30 feet below low water.

*Port Burwell, Ont.*—Under contract No. 10257, with C. S. Boone Dredging and Construction Company, Ltd.; dredge *Meade.*

Quantity removed: 62,500 cubic yards scow measurement, at 19¾ cents per cubic yard, Class "B,' sand and clay.

Amount passed for payment, $12,421.87; inspection, $297.43; total expenditure, $12,719.30; work commenced June 17; completed October 6, 1914.

Object of work: Widening and deepening outer entrance channel to 21 feet.

*Parrsborough, N.S.*—Under agreement, District Engineer Locke. Day labour.
Quantity removed: 4,824 cubic yards, class "B,' mud and clay.
Amount passed for payment, $4,882.30; inspection; total expenditure, $4,882.30.
Suspended for season: September, 1915.
Object of work: Removal of obstructions in channel.

*Rainy River, Ont.*—Under contract No. 9630, extension with J. T. Horne: dredge, *Moose.*
Quantity removed: 87,201 cubic yards; place measurement, at 45 cents per cubic yard, class "B," clay and sand.
Amount passed for payment: $39,240.45; inspection, $284; total expenditure, $39,524.45.
Work resumed May 20; completed August 8, 1914.
Object of work: Deepening and widening channel 200 feet wide at old steamboat channel, depth 14 feet.

*Rustico, P.E.I.*—Under contract No. 9879, with V. T. Bartram, dredge *Edmund Hall.*
Quantity removed: 10,052 cubic yards, scow; 955 cubic yards, castover, place measurement, at 75 cents scowed; 35 cents, castover, per cubic yard, class "B."
Amount passed for payment, $7,873.75; inspection, $101.70; total expenditure, $7,975.45.
Work commenced June 22; completed July 16, 1914.
Object of work: Dredging channel 1,000 feet by 80 feet, through bar obstructing entrance, depth 10 feet.

*Rustico, P.E.I. (Inner Harbour).*—Under agreement with V. T. Bartram, dredge *Edmund Hall.*
Quantity removed: 17,001·2 cubic yards, scow measurement, at 28½ cents per cubic yard, class "B," sand.
Amount passed for payment, $4,845.34; inspection $12.50; total expenditure, $4,857.84.
Work commenced July 9; completed August 3, 1914.
Object of work: Dredging entrance channel to 10 feet, 80 feet wide in front of fish houses.

*Riviere La Lute, Que.*—
Day labour.
Total expenditure, $299.25.
Object of work: Removing overhanging trees and blasting of rock in river.

*River St. John, N.B.*—Under agreement by J. K. Seammel, district engineer. Snags.
Amount passed for payment, $1,967.70.
Work commenced August, 1914; completed October, 1914.
Object of work: Removal of snags in river.

*Rexton, N.B.*—Under agreement by District Engineer.
Day labour.
Amount passed for payment, $448.28.
Work commenced October, 1914; completed November, 1914.
Object of work: Dredging berth in front of public wharf to 15 feet.

*River Quinchien, Que.*—Under agreement by A. E. Dubuc, district engineer, Dredge *No. 106.*
Quantity removed, 340 cubic yards.
Amount passed for payment, $143.
Work commenced December, 1914; completed December, 1914.
Object of work: Draining land to 5 feet low water.

*River St. Charles, N.B.*—Under Geoffrey Stead, district engineer. Day labour.
Amount passed for payment, $1,301.46.
Work commenced July, 1914; completed September 18, 1914.
Object of work: To complete dredging of channel 3,300 by 30 feet across shoals in river, depth 3 feet low water.

*Swim's Point, N.S.*—Under agreement for removal of boulders, with Southern Salvage Company, ss. *Coast Guard.*
937 tons. Class A. Boulders.
Amount passed for payment, $2,424.10; inspection, $70.50; total expenditure, $2,494.60.
Work commenced April 1; suspended for season April 28.
Object of work: Removal of boulders from harbour.

*St. John Harbour, N.B.*—See Beacon Bar, German Street Slip, South Market Wharf, Foul Ground, Nelson and Wellington Slips.

*St. Andrews, N.B.*—Under contract No. 9521, with Maritime Dredging and Construction Company, Ltd.
No work done in 1914.
Amount passed for payment, drawback of 1914, $998.14.

*Sand Heads.*—See Fraser River, B.C.

*St. George, N.B.*—Under contract No. 9500 extension with J. S. Gregory.
Amount passed for payment, $2,237.79, to pay drawback of 1913.
Total expenditure, $2,237.79.

*Sault Ste. Marie, Ont.*—Under contract No. 9,065, extension with Soo Dredging and Construction Co.
Quantity removed: 4,103·5 cubic yards scow measurement, class "A"; 1,226·5 cubic yards, scow measurement, class "B," rock, sand and mud.
No payment made.

*Sault Ste. Marie, Ont.*—Under contract No. 8960. See also A. C. Ry. slip done under same contract with Soo Dredging and Construction Co.; dredges *No. 3, No. 8,* and Derrick.
Quantity removed: 12,364 cubic yards, place measurement, at $3.47 per cubic yard, class "A"; 2,763 cubic yards, place measurement, at 92 cents per cubic yard, class "B," rock, boulders, mud and sand.
Amount passed for payment, $45,098.04; inspection, $4,431.44; total expenditure, $49,529.48.
Work resumed April 24, 1914; suspended for season December 1, 1914.
Object of work: To provide a slip at foot of Elgin street and between A. C. Ry. slip and new Ontario dock and dredging main channel to 21·5 feet.

*South West Miramichi, N.B. (Barnaby River).*—Under contract No. 9651, with Peter England, dredge *Peter England.*
Quantity removed: 3,555 6 cubic yards, place measurement, at 60 cents per cubic yard, class "B," clay sand and gravel.
Amount passed for payment, $2,133.33; inspection, $103.88; total expenditure, $2,-
3 and 4 feet.
Work commenced July 3; suspended for season November 13, 1914.
Object of work: Dredging two channels at upper and lower end of Barnaby Island to 237.21.

*Saguenay River, Que.*—Under contract No. 7925, extension, with Continental Dredging Company, Ltd.; dredge, *Algonquin.*

Quantity removed: 6,006 cubic yards, scow measurement, at 32½ cents per cubic yard, class "B," clay.

Amount passed for payment, $1,951.95; inspection, $30.38; total expenditure, $1,982.33.

Work commenced July 1, 1913; completed July 4, 1913, but not paid for until 1914.

*Southport.*—*See* Charlottetown.

*South Market Wharf, St. John, N.B.*—Under agreement with Maritime Dredging and Construction Company, Ltd.; dredge *Beacon Bar.*

Quantity removed: 545 cubic yards, place measurement, at 47 cents per cubic yard, class "B," mud.

Amount passed for payment, $256.15.

Work commenced June 28; completed July 6, 1914.

Object of work: Dredging the face of wharf 10 feet below extreme low tide.

*Starkley's, N.B.*—Under agreement with St. John River Dredging and Construction Co.; dredge *Tantawanta.*

Quantity removed: 1,658·5 cubic yards, class "B," sand and clay.

Amount passed for payment, $352.92; inspection, $9; total expenditure, $361.92.

Work commenced August 31, 1914; completed September 2, 1914.

Object of work: Dredging basin in front of wharf and berths thereat to 9 feet.

*St. Eloi, Que.*—

Day labour.

Amount passed for payment, $999·37.

Object of work: Dredging 800 by 20 feet in Rivière a la Loup.

*Trenton, Ont.*—Under contract No. 9,473, extension with R. Weddell & Co.; dredges *I.X.L. Trenton* and *Togo.*

Quantity removed: 13,160 cubic yards, place measurement removed, $1.20, and 190 cubic yards class "A" drilled, blasted and removed at $3.95, class "A;" 255,600 cubic yards, place measurement at 22 cents per cubic yard, class "B," mud, boulders and rock.

Amount passed for payment, $72,774.50; inspection, $957.40; total expenditure, $73,731.90.

Work resumed May 5, 1914; completed September 16, 1914.

Object of work: Dredging entrance channel to lower harbour to 14 feet below low water with turning basin 1,500 by 100 feet.

*The Range, N.B.*—Under agreement with St. John River Dredging Co.; dredge *Tantawanta.*

Quantity removed: 1,753 cubic yards, place measurement, at 30 cents per cubic yard, class "B," mud and slabs.

Amount passed for payment, $525.90; inspection, $27; total expenditure, $552.90.

Work commenced June 24, 1914; completed June 29, 1914.

Object of work: Dredging basin at high water wharf to 4 feet.

*Tamboline Slough, B.C.*—Under agreement with The Navigation Dredging Company, Limited; dredge.

Quantity removed, 19,487 cubic yards, place measurement, at 19 cents per cubic yard, class "B."
Amount passed for payment, $3,700.82.
Work commenced April 27, 1914; completed May 30, 1914.
Object of work: Dredging the outer end of slough to 7 feet.

*West St. John, N.B.*—*See* Nelson and Wellington Slips and Navy Island Bar.

*Whycocomagh, N.S.*—Under contract No. 9641, extension with Atlantic Dredging Company, Ltd.; dredge, *Pepperell.*
Quantity removed: 760 cubic yards, scow measurement, at 19 cents per cubic yard, class "B," mud. (Note—2,262 cubic yards deducted from final estimate for work done below grade.)
Inspection, $20.20.
Work resumed August 7; completed August 10, 1914.
Object of work: Dredging entrance channel, turning basin and berths at public wharf.

*Windsor, N.S.*—Under agreement with Wm. W. Shaw, hand dredging.
Quantity removed: 3,083½ cubic yards, place measurement, at 60 cents per cubic yard, class "B," mud.
Amount passed for payment, $1,850.10; inspection, $61.40; total expenditure, $1,911.50.
Work commenced June 15; completed November 28, 1914.
Object of work: Dredging berth 450 by 100 feet to 3 feet in depth.

*White's Cove, N.B.*—Under agreement with St. John River Dredging Co,; dredge *Tantawanta.*
Quantity removed: 2,188·8 cubic yards, place measurement, at 30 cents per cubic yard, class "B," clay, sand and mud.
Amount passed for payment, $656.64; inspection, $45; total expenditure, $701.64.
Work commenced July 7, 1914; completed July 22, 1914.
Object of work: Dredging basin at wharf to 9 feet.

*West Arichat, N.S.*—Under agreement with Atlantic Dredging Co., Lt.; dredge *Quency.*
Quantity removed: 9,123 cubic yards, scow measurement at 38½ cents per cubic yard, class "B," stone, clay, mud, sand, and gravel.
Amount passed for payment, $3,512.36; inspection, $163.95; total expenditure, $3,676.31.
Work commenced September 19, 1914; completed October 28, 1914.
Object of work: Removing two shoals, 12 feet and 13 feet depth.

*Webster's, N.B.*—Under agreement with New Brunswick Dredging and Construction Co., Ltd.; dredge *Tantawanta.*
Quantity removed: 6,771·1 cubic yards, scow measurement, at 28 cents per cubic yard, class "B," sand and clay.
Amount passed for payment, $1,895.91; inspection, $54; total expenditure, $1,949.91.
Work commenced September 28, 1914; completed October 17, 1914.
Object of work: Dredging basin in front of wharf to 9 feet.

*Young's Cove, N.B.*—Under agreement with St. John River Dredging Co., dredge *Tantawanta.*

Quantity removed: 972·4 cubic yards, place measurement, at 30 cents per cubic yard, class "B," clay.

Amount passed for payment, $291.72; inspection, $23.70; total expenditure, $315.42.

Work commenced June 30, 1914; completed July 5, 1914.

Object of work: Dredging approach basin to wharf to 9 feet low water.

*Yarmouth, N.S.—Evangeline Wharf.*—Under agreement with Maritime Dredging and Construction Co., Ltd.; dredge *Beacon Bar.*

Quantity removed: 10,096 cubic yards, scow measurement, at 40 cents per cubic yard, class "B," mud.

Amount passed for payment, $4,038.40; inspection, $215.30; total expenditure, $4,253.70.

Work commenced October 3, 1914; completed November 4, 1914.

Object of work: Dredging at Evangeline wharf to improve accommodation.

| Name. | Official Registry Number. | Tonnage. | When built. | Where built. | Builder. | Cost equipped. | Present estimated value. | Hull. Material. | Hull. Length O.A. | Hull. Beam O.A. | Hull. Working draft. | Hull. Draft, loaded. | Main Engines. Type. | Main Engines. Size. | Main Engines. Maker. | Propelling Engines. Number. | Propelling Engines. Type. | Propelling Engines. Size. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $ | $ | | ′ ″ | ′ ″ | ′ ″ | ′ | | | | | | |
| P.W.D. No. 1... | 134,184 | G. 1605 | 1905 | Sorel, Que | Dept. Pub. Wks. | 612,784 | 600,000 | Steel. | 147 | 42 0 | 12 0 F<br>15 0 A | 18 | Triple expansion | 14″, 22″, & 36″ x 22″ | Polson Iron Works. | 2 | Triple expansion. | 14″, 22″ & 36″ x 22″. |
| P.W.D. No. 2... | 71,716 | 290 | 1875 | Renfrew, Scotland | Wm. Simons & Co., Ltd. | 100,000 | 30,000 | Iron . | 176 | 30 0 | 11 0 | 15 | Marine | 28″ x 21″... | Wm. Simons & Co., Ltd. | 1 | Marine. .... | 28″ x 21″. |
| P.W.D. No. 7... | 130,249 | (G232·01)<br>N 46·69 | 1872 | Renfrew, Scotland | Wm. Simons & Co., Ltd. | 110,000 | 75,000 | Iron . | 132 | 21 0 | 8 0 | 6 | Vertical, Low pressure. | .. .... | Wm. Simons & Co., Ltd. | 2 | Fore and aft condensing. | 22″ x 24″. |
| P.W.D. No. 306 | 129,529 | (G677·38)<br>R434·75 | 1910 | Renfrew, Scotland | Wm. Simons & Co., Ltd. | 210,000 | 200,000 | Steel. | 200 | 36 6 | 11 0 | ... | Fore and aft compound. | 18″ & 36″ x 24″. | Wm. Simons & Co., Ltd. | 2 | Fore and aft compound. | 18″ 36″ x 24″. |

| Name. | Boilers. Number. | Boilers. Type. | Boilers. Diameter. | Boilers. Length. | Boilers. Horse power. | Boilers. Fuel consumption per day of 10 hours. | Fuel. Capacity. | Fuel. Kind. | Working depth. Maximum. | Working depth. Minimum. | Length of ladder. | Buckets. Number. | Buckets. Size. | Hoppers. Number. | Hoppers. Capacity of each. | Anchor cables. Number. | Anchor cables. Size. | Anchor cable engines. Size. | Anchor cable engines. Type. | Condenser. Size. | Condenser. Type | No. of crew. | Average capacity. | Cu. Yds. per hour. Clay. | Silt. | Sand. | Gravel. | Clay and silt. | Sand and gravel. | Boulder. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ′ ″ | ′ ″ | | | | | ′ | ″ | ′ ″ | | | | Cu. yds | | | | | | | | Cu. yds | | | | | | | | |
| P.W.D. No. 1... | 2 | Cylindrical. | 12 9 | 11 0 | .... | 5 tons... | 150 tons.. | Soft coal.... | 52 | 17 | 107 11 | 48 | 1 c.y. | 2 | 500 | 6 | 1⅝″ & 1¼″ | 2-10″ x 12″ | Simple | 3′ 0″ x 8′ 5′ | Surface | 22 | .... | 1000 | 1000 | .... | 1000 | 1000 | [1]400 | 80 |
| P.W.D. No. 2... | 1 | Scotch Marine. | 14 7 | 9 6 | .... | 4 tons... | 60 tons.... | Sydney coal | 28 | 11½ | 65 0 | 32 | ¾ c.y. | 1 | 350 | 2 | 1¹/₁₆ .... | 7″x10″. | Simple | 3′0″x6′ 0″ | Surface | 19 | 1200 | 100 | 150 | 200 | 200 | 130 | 200 | .. |
| P.W.D. No. 7... | 1 | Scotch..... | 10 0 | 9 0 | .... | 3 tons... | 70 tons.... | Soft coal.... | 20 | 7 | 51 0 | 25 | 4 c.ft. | 1 | 90 | 12 | ⅞″, ¼″, ⅝″ | 2-6″ x | Simple | [2]12 tubes | Surface | 16 | 1000 | 200 | 200 | 100 | 200 | 200 | 100 | .. |
| P.W.D. No. 306 | [2]1 | Scotch Marine.... | 10 0 | 12 9 | .... | 20 bbls. | 200 bbls... | Crude oil... | 60 | 15 | 130 0 | 44 | 24 c.ft | .. | ..... | 7 | 1½″, 1⅛″, 1¼″, 1″ | 8″x 11″ | Simple | 8′ 0″.. | Surface | 43 | 3000 | .... | 150 | 300 | 300 | 100 | [4]200 | .. |

[1] Includes boulders. [2] And donkey. [3] ⅝″ tubes 6′ 0″ long. [4] Includes boulders.

| Name. | Official Registry Number. | Tonnage. | When built. | Where built. | Builder. | Cost equipped. | Present estimated value. | Hull. | | | | | Pumping Engines. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Length O.A. | Beam O.A. | Working draft. | Draft loaded | Type. | Size. | Horse power. |
| | | | | | | | $ | | ′ ″ | ′ ″ | ′ ″ | ′ ″ | | | |
| P.W.D. No. 3 | 130,642 | (G. 475) (R. 319) | 1900 | Rotterdam | Lohnis & Co. | $60,398 | 45,000 | Steel. | 162 0 | 28 0 | 10 6 | 13 0 | Triple expansion | 11 1/16, 16 7/32, 27 1/16 x 18″. | 300 |
| P.W.D. No. 5 | | | 1906 | Toronto. | Polson Iron Works | 183,770 | 183,000 | Steel. | 117 0 | 52 0 | 6 0 | | | 14″, 22 x 36″ | |
| P.W.D. No. 12. | 133,759 | 434·84 | 1913 | St. John, N.B. | Phoenix Foundry & Mach. Co. | 82,500 | 82,500 | Steel. | 110 0 | 32 0 | 3 6 | | Triple expansion | 8 3/4″, 13 1/2 & 22″ x 16″ | 200 |
| P.W.D. No. 201 | | | 1900 | Selkirk, Man. | Polson Iron Works | 30,000 | 20,000 | Wood | 115 0 | 33 0 | 4 6 | | Compound | 10″ & 20″ x 12″ | |
| P.W.D. No. 303 | | 4,023 | 1907 | Danzig, Germany | Shichan & Co. | 250,000 | 235,000 | Steel. | 200 0 | 34 6 | 10 0 A. 5 0 F. | 13 0 A. 15 0 F. | Compound | 2-13 3/4″ & 25″ x 15″ | 270 |
| P.W.D. No. 305 | | (G591·63) (R319.38) | 1901 | New Westminster, B.C. | Polson Iron Works | 130,172 | 100,000 | Steel & wood | 125 0 | 32 0 | 5 6 | | Triple expansion | 13″ 5″, 22″ & 36″ x 20″ | 500 |

| Name. | Propelling Engines. | | | Boilers. | | | | | | Fuel. | | Size of suction. | Discharge Pipe. | | Hopper. | | Working Depth. | | Average capacity, Cu. Yds | No. of crew. | Cu. Yds. per Hour. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type. | Size. | Horse power. | Number. | Type. | Diameter. | Length. | Horse power. | Fuel consumption per day of 10 hours. | Capacity. | Kind. | | Size. | Length. | Number. | Capacity, Cu. yds. | Maximum. | Minimum. | | | Sand. | Silt. | Clay. | Gravel. | Sand and gravel | Sand and silt. | Sand, gravel, and boulders. |
| | | | | | | ′ ″ | ′ ″ | | | | | ″ | ″ | ′ | | | ′ | ′ ″ | | | | | | | | | |
| P.W.D. No. 3 | [1] | | | 2 | Scotch Marine | 9 3/4 | 9 6 | | 5,500 lb. | 22 tons. | Soft coal | 24 | 21 1/2 | | 2 | 483 | | | | 17 | 700 | 600 | 300 | 900 | 483 | 700 | |
| P.W.D. No. 5 | | | | 2 | Scotch Marine | 12 0 | | | 8 tons. | 250 tons. | Soft coal | 26 | 25 | 2000 | | | 50 | 1 | | 29 | 350 | 400 | 200 | 270 | 300 | 400 | |
| P.W.D. No. 12. | | | | [2]1 | Scotch Marine | 9 11 | 12 0 | | 3 tons. | 20 tons. | Soft coal | 15 | 15 | 1000 | | | 18 | 2 | 2000 | 14 | 300 | | | | | | |
| P.W.D. No. 201 | Simple | 14″ x 60″ | | 2 | Scotch | 7 0 | 9 0 | | 2 1/2 tons. | 15 tons. | Soft coal | 10 | 12 | 200 | | | 12 | 4 6 | | 8 | | 1 | | | | | |
| P.W.D. No. 303 | Compound | 2-13 3/4″ & 25″ x 15″ | | 2 | Cylindrical | 12 0 | 10 8 | | 40 bbls. | 340 bbls. | Oil | [4]16 | 24 | | 6 | 800 | | | | 27 | 1600 | 1400 | 500 | | 800 | 1500 | |
| P.W.D. No. 305 | Horizontal | 16″ x 72″ | | [5]2 | Heine water tube. | 5 | 18 9 | | 40 bbls | 300 bbls. | Oil. | 20 | 20 | 4000 | | | 40 | 8 | | 20 | 500 | 800 | 400 | 400 | 450 | 650 | |

[1]Same engines for pumping and propelling. [2]And donkey boiler. [3]725 cu. yds. per day. [4]2-suction pipes. [5]8′ 3″ W. x 13′ 0″ H.

| Name. | Official Registry Number. | Tonnage. | When built. | Where built. | Builder. | Cost equipped. | Present Estimated Value. | Hull. | | | | Fuel Capacity. | Kind of Fuel. | Main Engines. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Length O.A. | Beam O.A. | Working Draft. | | | Type. | Size. |
| | | | | | | $ | $ | | ′ ″ | ′ ″ | ′ ″ | | | | |
| P.W.D. No. 6. | ..... | ..... | 1896 | Levis, Que. | Carrier Laine Co. | 42,925 | 50,000 | Steel. | 91 0 | 36 0 | 5 6 F. 8 0 A. | 25 tons. | Soft coal. | *Compound | 11½″& 24″x 14″. |
| P.W.D. No. 9. | 130,346 | 368·37 | 1906 | Toronto, Ont. | Bertram Engine Works. | 49,350 | 55,000 | Iron | 90 0 | 36 0 | 6 0 | 31 tons. | Soft coal. | Simple | (2) 10x″ 14″ |
| P.W.D. No. 10. | 130,347 | 244·29 | 1871 | Summerside, P.E.I. | John McKinnon. | 22,000 | 10,000 | Wood. | 81 0 | 24 0 | 6 0 | 10 tons. | Soft coal. | Simple | 16″ 16″. |
| P.W.D. No. 11. | 130,348 | 192·12 | 1911 | Pugwash, N.S. | Burns & Waters, Hull, Q. | 24,000 | 30,000 | Wood. | 64 7 | 24 9 | 4 2 | 10 tons. | Soft coal. | †Simple | (2) 8½″x 12″. |
| P.W.D. No. 13. | 133,950 | 404 | 1914 | Ottawa, Ont. | P. W. D. | 89,900 | 89,900 | Wood | 95 0 | 34 0 | 7 0 | 60 tons. | Soft coal. | *Simple | (2) 12′x14″. |
| P.W.D. No. 4. | ..... | ..... | 1911 | Ottawa, Ont. | P. W. D. | 83,000 | 80,000 | Wood. | 90 0 | 34 0 | 5 6 | 22 tons. | Soft coal. | Simple | (2) 10″x14″. |
| P.W.D. No. 101 | ..... | ..... | 1904 | St. Louis de Gonzague, Q. | P. W. D. | 14,380 | 12,000 | Wood. | 54 0 | 20 0 | ..... | | Soft coal. | Simple | 8″x |
| P.W.D. No. 102 | 134,537 | 104 | 1906 | Buckingham, Que. | P. W. D. | 21,600 | 18,000 | Wood. | 66 6 | 22 0 | 2 6 | 6½ tons. | Soft coal. | Simple | (2) 8″x12″. |
| P.W.D. No. 103 | 134,538 | 104 | 1909 | Ottawa, Ont. | P. W. D. | 23,000 | 18,000 | Wood. | 61 0 | 24 0 | 2 6 | 6 tons. | Soft coal. | Simple | (2) 8″x12″. |
| P.W.D. No. 105 | 117,173 | 136·15 | 1902 | Bay City, Mich. | Robt. Gordon Stewart. | 20,000 | 8,000 | Wood. | 76 0 | 24 0 | 9 0 | 20 tons. | Soft coal. | Simple | (2) 12″x16″. |
| P.W.D. No. 108 | ..... | ..... | ..... | Deschenes, Que. | Mr. Askwith | 6,500 | 6,000 | Wood | 51 0 | 20 0 | 2 0 | 5 tons. | Soft coal. | Simple | 7″x14″. |
| P.W.D. No. 109 | 131,123 | 766·2 | 1906 | Duluth, Wis. | Superior Dredge Co. | ..... | 200,000 | Wood | 133 4 | 44 0 | 9 0 | 100 tons. | Soft coal. | Simple | (2) 18″x24″. |
| P.W.D. No. 110 | 131,128 | 458·28 | 1896 | Kingston, Ont. | Michael Connelly. | ..... | 75,000 | Steel. | 109 0 | 42 0 | 8 0 | 35 tons. | Soft coal. | *Compound | 12″ & 24″x14″. |
| P.W.D. No. 111 | ..... | 148·3 | 1905 | Roberval, Que. | Johnny Poitras. | 7,600 | 7,000 | Wood. | 75 0 | 25 0 | 6 0 | ..... | Wood or coal. | Simple | (2) 9″x10″. |
| P.W.D. No. 112 | ..... | ..... | 1905 | Sturgeon Falls, Ont. | P. W. D. | 21,642 | 18,000 | Wood. | 75 4 | 28 6 | 11 0 | 20 tons. | Soft coal. | Simple | 12½″x15″. |
| P.W.D. No. 113 | ..... | ..... | 1889 | Ottawa, Ont. | P. W. D. | 25,000 | 5,000 | Wood. | 75 0 | 29 0 | 10 0 | 12 tons. | Soft coal. | Simple | 13″x15″. |
| P.W.D. No. 114 | 133,941 | (G138·38) (R102·96) | 1900 | Ottawa, Ont. | P. W. D. | 24,500 | 18,000 | Wood. | 83 0 | 28 5 | 8 6 | 11 tons. | Soft coal. | Simple | (2) 14″x16″. |
| P.W.D. No. 115 | ..... | 250 | 1906 | Ottawa, Ont. | P. W. D. | 81,844 | 70,000 | Wood. | 95 0 | 37 0 | 13 0 | 27 tons. | Soft coal. | *Simple | (2) 4″x16″. |
| P.W.D. No. 116 | 131,129 | 375·28 | 1902 | Sorel, Que. | P. W. D. | 75,000 | 70,000 | Wood | 92 0 | 35 0 | 11 0 | 35 tons. | Soft coal. | *Simple | (2) . 4″x16″. |
| P.W.D. No. 117 | 112,186 | 570·49 | 1908 | Toronto, Ont. | Polson Iron Works. | 91,700 | 80,000 | Steel & wood. | 106 9 | 38 0 | 8 0 | 75 tons. | Soft coal. | Simple | (2) . 6″x18″. |
| P.W.D. No. 118 | ..... | 100 | 1903 | Temiskaming Station, Que. | P. W. D. | 19,600 | 15,000 | Wood | 67 0 | 25 6 | 5 0 | 5 tons. | Soft coal. | Simple | (2) 6″x10″. |
| P.W.D. No. 119 | ..... | ..... | 1903 | Ottawa, Ont. | P. W. D. | 23,250 | 17,000 | Wood | 70 0 | 22 0 | 4 6 | 14 tons. | Soft coal. | Simple | (2) 7″x14″. |
| P.W.D. No. 120 | 133,938 | 50·87 | 1899 | Ottawa, Ont. | P. W. D. | 25,000 | 20,000 | Wood | 87 0 | 33 0 | 8 6 | 18 tons. | Soft coal. | Simple | 14″x16″. |
| P.W.D. No. 121 | 134,541 | 104 | 1906 | Ottawa, Ont. | P. W. D. | 21,023 | 18,000 | Wood | 61 0 | 24 0 | 2 6 | 6 tons. | Soft coal. | Simple | (2) 8½″x12″. |
| P.W.D. No. 122 | ..... | ..... | 1898 | Grandes Piles, Que. | P. W. D. | 15,000 | 10,000 | Wood | 70 0 | 20 9 | 2 6 | 5 tons. | Soft coal. | Simple | (2) 9″x9″. |
| P.W.D. No. 123 | 133,934 | 403·73 | 1913 | Ottawa, Ont. | P. W. D. | 80,238 | 80,000 | Wood. | 95 0 | 34 0 | 7 0 | 60 tons. | Soft coal. | Simple | (2) 12″x14″. |
| P.W.D. No. 204 | ..... | ..... | 1911 | Selkirk, Man. | P. W. D. | 15,088 | 10,000 | Wood. | 82 0 | 34 0 | 4 6 | 20 tons. | Soft coal. | Simple | (2) 8″x12″. |
| P.W.D. No. 205 | ..... | ..... | 1910 | Selkirk, Man. | P. W. D. | 42,797 | 20,000 | Wood. | 77 0 | 38 0 | 7 0 | 20 tons. | Soft coal. | Simple | (2) 10″x14″. |
| P.W.D. Mo. 208 | ..... | ..... | 1914 | Selkirk, Man. | P. W. D. | 14,000 | 14,000 | Wood. | 60 0 | 24 0 | 4 6 | 10 tons. | Soft coal. | Double | x10. |
| P.W.D. No. 301 | 130,896 | 538·10 | 1908 | NewWestminster, B.C. | Polson Iron Works. | 131,216 | 115,000 | Steel. | 108 0 | 41 0 | 7 0 | 350 bbls. | Oil. | Simple | (2) 14″x10″. |
| P.W.D. No. 307 | ..... | 138·67 | 1888 | Victoria, B.C. | W. Turpel & Son. | 24,000 | 15,000 | Wood and iron | 92 0 | 31 0 | 4 0 | 40 tons. | Soft coal. | *Simple | (2) 13″x13″. |

* Surface condensing. † Iron strapped.

| Name. | Boilers. Number | Type. | Dia. | Length. | Press. Allowed | Horse-Power. | Fuel consumption per ft. of 10 h | Spuds. Number | Size. | Material. | Work-ing Depth. Max. | Min. | Dippers. Number | Dipper Arm. Size. | Size. | Material. | Length of Dipson. | Main Hoist Line. Size. | Material. | Length. | No. of crew one shift. | Province where employed. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ′ ″ | ′ ″ | Lb. | | | | | | ′ ″ | ′ ″ | | C.yd. | | | ′ ″ | ″ | | | | |
| P.W.D. No. 0.. | 1 | Scotch..... | 9 0 | 10 0 | 120 | 47 | 1½ tons.. | 3 | (2) 36″x36x50′ (1) 24″x24″x60′ | Fir..... | 33 0 | 8 0 | 2 | (1) 5 (1) 3½ | (1) 23″x23″x50′.. (1) 23″x23″x40′.. | ..... *Oak..... | 48 0 | 1¼ | Wire rope. | 325 | 14 | Mar. Prov. |
| P.W.D. No. 9.. | 1 | Scotch..... | 9 0 | 10 0 | 145 | 52½ | 2 tons.. | 3 | 24″x24″x50′..... | †Fir..... | 26 0 | 8 0 | 2 | 2½ | 10″x16″x46′..... | *Oak..... | 41 0 | 1½ | Wire rope. | 250 | 12 | Mar. Prov. |
| P.W.D. No. 10.. | 1 | Locomotive | 5 6 | 13 0 | 50 | 26 | 1 ton... | 3 | 14″x16′x45′..... | *bFir..... | 21 0 | 9 0 | 2 | 1½ | 13½″x15″x38′ 3″.. | Oak..... | 31 0 | 1⅛ | Chain.... | 240 | 11 | Mar. Prov. |
| P.W.D. No. 11.. | 1 | Scotch..... | 6 3 | 8 0 | 140 | 30 | 1 ton... | 3 | 14″x14′x38′..... | Oak..... | 17 0 | 5 0 | 1 | 1 | 9′x9″..... | *Oak..... | 30 0 | ⅞ | Chain.... | 210 | 9 | Mar. Prov. |
| P.W.D. No. 13.. | 1 | Scotch..... | 9 0 | 10 | 140 | ..... | 2 tons... | 3 | 30″x30″x.. ′..... | Fir..... | 22 0 | 8 0 | 2 | (1) 3½ 1 2½ | 15½″x17″..′..... | Oak & st'l | 39 0 | 1⅛ | Wire rope. | 350 | 10 | Mar. Prov. |
| P.W.D. No. 4.... | 1 | Scotch..... | 9 0 | 10 0 | 140 | 53 | 2¼ tons.. | 3 | (2) 24″x24″x52′ (1) 18″x20″x52′ | †Fir..... | 22 0 | 8 0 | 1 | 2½ | 16″x17″x40′..... | *Oak..... | 44 0 | 1½ | Wire rope. | 175 | 12 | Ont. & Que. |
| P.W.D. No. 101. | 1 | Locomotive | 3 6 | 10 6 | 100 | 35 | 1½ tons.. | 3 | 12″x12′x18′..... | Pine..... | 8 0 | 6 0 | 2 | ¾ | ..... | Oak..... | 22 0 | ¾ | Chain.... | 140 | 6 | Ont. & Que. |
| P.W.D. No. 102. | 1 | Locomotive | 4 4 | 15 0 | 118 | 37 | 1½ tons.. | 3 | 12″x12″..... | Oak..... | 16 0 | 3 0 | 1 | 1 | 8½″x10″x26′..... | eOak..... | 29 3 | ⅞ | Chain.... | 200 | 8 | Ont. & Que. |
| P.W.D. No. 103. | 1 | Locomotive | 4 4 | 15 0 | 125 | 37 | 1½ tons.. | 3 | 12″x14″x38′..... | Oak..... | 16 0 | 6 0 | 1 | 1 | 8½″x10″x26′..... | ..... | 30 0 | ⅞ | Chain.... | 200 | 8 | Ont. & Que. |
| P.W.D. No. 105. | 1 | Fitzgibbon*d* | 6 0 | 10 8 | 85 | 20 | 1½ tons.. | 3 | (2) 18″x18′x42′ (1)14″x15½″x42)) | Oak..... | 20 0 | 9 0 | 1 | 2½ | 15½″x20½″x36′.... | Oak & st'l | 35 6 | 1⅛ | Wire rope. | 250 | 7 | Ont. & Que. |
| P.W.D. No. 108. | 1 | Scotch..... | 4 3 | 8 0 | 85 | ..... | 1½ tons.. | 3 | 12″x12″x33′..... | Oak..... | 15 0 | 6 0 | 1 | 1 | 12″x12″x32′..... | Oak..... | 26 0 | 1 | Wire rope. | 152½ | 5 | Ont. & Que. |
| P.W.D. No. 109. | 1 | Scotch..... | 10 6 | 12 6 | 135 | ..... | 4 tons... | 3 | (2) 40″x40′x55′ (1) 30″x30″x60′ | Fir..... | 27 0 | 13 6 | 2 | (1) 10 (1) 4 | 26½″x31½″x55′... | eSteel.... | 54 0 | 2½ | Wire rope. | 225 | 18 | Ont. & Que. |
| P.W.D. No. 110. | 1 | Scotch..... | 10 0 | 10 6 | 120 | 120 | 1½ tons.. | 4 | (2) 36″x36′x.. (2) 24″x24′x.. | Fir..... | 55 0 | 15 6 | 2 | 5 | (1) 20″x23″x84′ (1) 20″x21″x64′ | fOak..... | 41 3 | 1⅜ | Wire rope. | 400 | 15 | Ont. & Que. |
| P.W.D. No. 111. | 1 | Locomotive | 4 0 | 17 0 | 100 | 50 | 1½ cords | 3 | (2) 14″x14′x..′ (1) 10″x10′x..′ | Oak..... | 18 0 | 6 0 | 1 | 1 | 13″x13½″x..′..... | Oak..... | 40 0 | 1 | Chain .. | 200 | 8 | Ont. & Que. |
| P.W.D. No. 112. | 1 | Fitzgibbon*h* | 4 7 | 8 7 | 110 | 48 | 1½ tons.. | 2 | 20″x20″x12′..... | Oak..... | 19 0 | 11 0 | 1 | 2½ | 13½″x14½″x..′.... | gOak..... | 36 0 | 1½ | Chain .. | 172 | 11 | Ont. & Que. |
| *m*P.W.D. No. 113 | 1 | Locomotive | 4 6 | 12 3 | 80 | ..... | 2 tons.. | 3 | (2) 16″x16′x39′ (1) 13″x14″x42′ | Oak..... | 20 0 | 10 0 | 1 | 2 | 15½″x16½″x36′.... | Oak & ir'n | 28 6 | 1⅛ | Chain .. | 187 | 11 | Ont. & Que. |
| P.W.D. No. 114. | 1 | Locomotive | 4 2½ | 16 2½ | 100 | ..... | 1½ tons.. | 3 | (2) 17″x18′x..′ (1) 12″x13″x..′ | Oak..... | 22 6 | 10 0 | 2 | (1) 2 (1) 1 | 16″x17⅜″x38′ .. | Oak & ir'n | 38 0 | 1½ | Chain.... | 195 | 8 | Ont. & Que. |
| P.W.D. No. 115. | 1 | Scotch..... | 9 2 | 8 6 | 130 | 85 | 3 tons.. | 3 | (2) 30″x30′x..′ (1) 20″x21″x..′ | Fir..... | 35 0 | 13 0 | 2 | (1) 5 (1) 3 | 18″x x55′..... | Fir..... | 45 0 | 2 | Wire rope. | 225 | 13 | Ont. & Que. |
| P.W.D. No. 116. | 1 | Locomotive | 6 0 | 19 0 | 75 | 80 | 2½ tons.. | 3 | (2) 30″x30′x.. (1) 20″x24′x.. | Fir..... | 30 0 | 14 0 | 1 | 5 | 19″x19″x49′ 4″.... | jOak..... | 45 0 | 2⅜ | Wire rope. | 205 | 15 | Ont. & Que. |
| P.W.D. No. 117. | 1 | Scotch..... | 10 4 | 10 10 | 145 | ..... | 3½ tons.. | 3 | (2) 36″x36″x66′ (1) 24″x25″x66′ | Steel plates. | 45 0 | 16 0 | 2 | (1) 8 (1) 5 | 24″x24″x66′..... | Steel & wood. | 50 0 | 2½ | Wire rope. | 230 | 15 | Ont. & Que. |
| P.W.D. No. 118. | 1 | Locomotive | 4 2 | 16 6 | 115 | ..... | 1 ton... | 3 | 14″x14′x..′..... | Oak..... | 19 0 | 8 0 | 1 | 1½ | 13″x13″x..′..... | Oak..... | 34 0 | 1 | Chain.... | 175 | 12 | Ont. & Que. |
| P.W.D. No. 119. | 1 | Locomotive | 4 6 | 8 0 | 135 | 40 | 1 ton... | 3 | 13½″x″13½″x35″... | Oak..... | 15 0 | 8 0 | 1 | 1½ | 12″x13″x36′..... | Oak & st'l | 30 0 | 1 | Wire rope. | 150 | 8 | Ont. & Que. |
| P.W.D. No. 120. | 1 | Locomotive | 4 2 | 15 5 | 95 | ..... | 1½ tons.. | 3 | 24″x24″x..... | Wood ..... | 20 0 | 9 0 | 1 | 3½ | 15½″x16″x28′..... | Wood & iron. | 29 6 | 1⅛ | Chain.... | 200 | 11 | Ont. & Que. |
| P.W.D. No. 121. | 1 | Locomotive | 4 4 | 15 0 | 125 | 37 | 1½ tons.. | 3 | *x12′x..... | Oak..... | 16 0 | 6 0 | 2 | (1) 1 (1) ⅔ ⅔ | 8⅜″x10′x26′..... | Oak & st'l | 30 0 | ¾ | Chain.... | 200 | 8 | Ont. & Que. |
| P.W.D. No. 122 | 1 | Locomotive | 4 0 | 15 6 | 100 | ..... | 1 ton... | 3 | 14″x14′x..... | Oak..... | 14 0 | 4 0 | 1 | | | Oak & ir'n | 40 0 | ⅔ | Chain.... | 200 | 8 | Ont. & Que. |
| P.W.D. No. 123. | 1 | Scotch..... | 8 6 | 9 6 | 140 | 30 | 2 tons... | 3 | 30″x30′x..... | Fir..... | 22 0 | 8 0 | 2 | (1) 3⅓ (1) 2⅔ | 15½″x17″x..... | Oak & st'l | 39 0 | 1⅛ | Wire rope. | 350 | 10 | Ont. & Que. |
| P.W.D. No. 204. | 1 | Locomotive | 4 0 | 16 0 | 130 | ..... | 1½ tons.. | 3 | 12″x12′x..... | Fir..... | 15 0 | 4 6 | 1 | 1½ | 14″x16″x..... | Oak..... | 10 0 | 1 | Wire rope | .. | 8 | Man. |
| P.W.D. No. 205. | 1 | Scotch..... | 10 0 | 10 0 | 150 | ..... | 1½ tons.. | 3 | 24″x24′x..... | Fir..... | 20 0 | 7 0 | 1 | 3 | 16″x18″x50′..... | Wood & st | 40 0 | 1½ | Wire rope. | 175 | 11 | Man. |
| P.W.D. No. 208. | 1 | Scotch..... | 6 0 | 8 0 | 125 | ..... | 1½ tons.. | 3 | 12″x12″..... | Wood..... | 12 0 | 5 0 | 1 | 1 | ..... | ..... | ..... | ⅞ | Wire rope. | 200 | 8 | Man. |
| P.W.D. No. 301. | 1 | Scotch*k*.... | 9 6 | 10 0 | 150 | 80 | 9 bbls.. | 3 | (2) 36″x36′x68′ (1) 30″x30″x68′ | †Fir..... | 40 0 | 15 0 | 3 | (2) 5 (1) 3 | ..... | Steel & wood. | 60 0 | 2½ | Wire rope. | 230 | 13 | B. C |
| P.W.D. No. 307. | 1 | Dry Back.. | 7 0 | 9 6 | 125 | 70 | 2½ tons.. | 3 | (2) 22″x23′x60′ (1) 16″x18′x60′ | Wood & iron. | 30 0 | 12 0 | 1 | 3 | 18″x21″..... | Wood & iron. | 50 0 | 1½ | Wire rope | 280 | 11 | B. C. |

*Iron bound. †Iron strapped. *a*Faced with steel plates. *b*With iron plating. *c*With iron sheeting. *d*Boiler 8 ft. high. *e*With wood filler.
*f*Covered by steel plate. *g*Ironed off. *h*Boiler 7′ 4″ high. *i*Wide, 6′ 1″ H. *j*Steel plate covering. *k*Also 1 Donkey boiler 3′x0′. *l*And Blue Gum wood. *m*Dismantled.

DEPARTMENTAL CLAM-SHELL AND ORANGE-PEEL DREDGES, 1915.

| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost equipped. | Present estimated value. | Hull. Material. | Hull. Length O. A. | Hull. Beam O. A. | Hull. Working Draft. | Fuel Capacity. | Kind of Fuel. | Main Engines. Number. | Main Engines. Type. | Main Engines. Size. | Boilers. Number. | Boilers. Type. | Boilers. Diameter. | Boilers. Length. | Boilers. Pressure Allowed. | Boilers. Horse Power. | Fuel consumption per day of 10 hrs. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $ | $ | | ′ | ″ | ′ ″ | | | | | | | | ′ ″ | ′ ″ | Lb. | | |
| P.W.D. No. 14 | | | | | | | | | | | | | | | D.C. | | | | | | | | |
| P.W.D. No. 106 | | 89·42 | 1911 | Sorel, Que | P.W.D | 7,000 | 7,000 | Wood | 60 0 | 25 0 | 5 2 | 8 tons | Soft coal | 1 | D.D. | 7″x12″ | 1 | Vertical | 3 6 | 9 0 | | | ½ ton. |
| P.W.D. No. 202 | | | 1911 | Selkirk, Man | P.W.D | 16,838 | 16,000 | Wood | 55 0 | 24 0 | 6 0 | 3 tons | Soft coal | 2 | Simple | 9″x12″ | 1 | Upright | 4 6 | 7 0 | 105 | 45 | 1 ton. |
| P.W.D. No. 203 | | | 1909 | Fork River, Man | P.W.D | 19,077 | 15,000 | Wood | 80 0 | 33 0 | 4 0 | 20 tons | Soft coal | 2 | Simple | 9″x12″ | 1 | Scotch | 7 0 | 9 0 | 150 | | 1 ton. |
| P.W.D. No. 206 | | 78·04 | 1907 | Athabasca Landing, Alta. | P.W.D | 4,000 | 2,000 | Wood | 60 0 | 32 0 | 2 0 | 4 cords | Wood | 1 | Simple | 8″x12″ | 1 | Vertical | 3 6 | 8 0 | 100 | | 1 cord. |
| | | | | | | 9,500 | 3,500 | Wood | 62 5 | 25 2 | 3 6 | | Wood | 2 | Simple | 7″x10″ | 1 | Upright | 3 2 | | 150 | 20 | [1]1½ cords. |
| P.W.D. No. 210 | | | [2]1904 | Winnipegosis, Man | P.W.D | | 2,000 | Wood | 60 0 | 20 0 | 3 0 | 2 cords | Wood | 1 | Simple | 8″x12″ | 1 | Vertical | 3 6 | 8 0 | 100 | | ½ cord. |
| P.W.D. No. 209 | | | | | | | | Wood | 40 0 | 20 0 | | | | 1 | Simple[4] | 7″x10″ | 1 | Upright | | | | | |
| P.W.D. No. 302 | | | 1911 | Nelson, B.C | Thos. Cunningham. | 12,000 | 12,000 | Wood | 68 7 | 31 3 | 1 10 | 40 tons | Soft coal | 2 | Simple | 8½″x10″ | 1 | Vertical | 3 6 | 7 8 | 135 | 23 | 3¾ ton. |
| [3]P.W.D. No. 304 | | 39 | 1908 | Pentieton, B.C | P.W.D | 5,285 | 5,285 | Wood | 52 8 | 18 3 | 1 6 | 10 cords | Wood | 2 | Simple | 6″x10″ | 1 | Vertical | 3 0 | 7 1 | 115 | 14 | ½ cord. |
| P.W.D. No. 309 | | 64 | 1907 | Kamloops, B.C | P.W.D | 7,500 | 6,750 | Wood | 57 0 | 24 0 | 1 6 | 10 cords | Wood | 2 | Simple | 6½″x10″ | 1 | Vertical | 3 0 | 7 7 | 115 | 16 | ½ cord. |
| P.W.D. No. 313 | 134,075 | 208·31 | 1913 | North Vancouver, B.C. | Wallace Shipyards, Ltd. | 18,000 | 17,100 | Wood | 84 0 | 35 0 | 2 6 | 12 tons | Soft coal | 2 | Simple | 10″x12″ | 1 | Vertical | 3 6 | 8 0 | 130 | 30 | ¾ ton. |
| | | | 1912 | Nakusp, B.C | S. Mills | 18,000 | 18,000 | Wood | 71 6 | 34 6 | 2 6 | 10 tons | Soft coal | 2 | Simple | 10″x12″ | 1 | Vertical | 4 6 | 8 3 | 130 | 30 | 1 ton. |

[1]Combined dredge and pile driver. Size Leads 6″x8″x40. Weight Hammer 2,000 lbs. Distance between leads 16′.
[2]2 ft. long. [3]Rebuilt 1910. [4]Double cylinder.

| Name. | Spuds. | | | Boom. | | | Buckets. | | | | Working Depth. | | | Size Hoist Cable. | Size Trip Cable. | Number of Crew. | Average Capacity. | Cubic Yards per Hour. | | | | | | Province where employed. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number. | Size. | Material. | Length. | Size. | Material. | Number. | Kind. | Size. | Make. | Max. | Min. | Can overcast from side of dredge. | | | | | Clay. | Sand. | Silt, mud. | Gravel. | Sand and Gravel. | Sand and Silt. | |
| | | | | Ft. | | | | | Cu.yd | | ′ | ″ | ″ | ″ | ″ | | Cu. yd. | | | | | | | |
| P.W.D. No. 14 | | | | 45 | 10″x12″ | Y. Pine | 1 | Orange Peel | 1 | Hayward | 40 | 5 | 0 | 26 | 0 | 8 | | | | 32 | | | | Nova Scotia |
| | | | | | | | 1 | Clam shell | ¼ | Andresen-Evans | | | | | | | | | | | | | | |
| P.W.D. No. 106 | 4 | 14″x14″ | Fir | 48 | 24″x24″ | Steel | 1 | Orange Peel | 1½ | Hayward | 16 | 6 | 0 | | | 8 | 300 | 50 | | | | | | Ont. and Que. |
| P.W.D. No. 202 | 3 | 16″x16″ | Fir | 52 | 24″x24″ | Steel | 1 | Orange Peel | 1½ | Hayward | 15 | 4 | 0 | 20 | 0 | 7 | 600 | 60 | | 40 | 40 | | | Man., Sask., Alta. |
| P.W.D. No. 203 | 3 | 12″x12″ | Fir | 50 | 12″x12″ | Fir | 1 | Orange Peel | 1½ | Hayward | 15 | 2 | 6 | 20 | 0 | 8 | 250 | 50 | | | 25 | 21 | | Man., Sask., Alta. |
| P.W.D. No. 205 | 3 | 10″x10″ | Spruce | 40 | 14″x10″ | Tamarack | 1 | Orange Peel | ¾ | Hayward | 8 | Nil. | | 12 | 0 | 6 | | 35 | 34 | 30 | [1]10 | 10to15 | 35 | Man., Sask., Alta. |
| P.W.D. No. 210 | 3 | 12″x12″ | Fir | 35 | 10″x10″ | Fir | 1 | Orange Peel | 1½ | Hayward | 12 | 4 | 0 | 15 | 0 | 8 | 300 | | | | | | | Man., Sask., Alta. |
| P.W.D. No. 209 | | 10″x10″x20′ | Fir | 32 | 10″x10″ | Fir | 1 | Clam shell | ¾ | Hayward | | | | | | | | | | | | | | Man., Sask., Alta. |
| P.W.D. No. 302 | 3 | 13½″x13½″x10′ | Wood | [2]40 | 14″x14″ | Wood | 2 | Orange Peel | 1 | Hayward | 20 | 2 | 2 | 25 | 0 | 8 | 405 | 20 | 40 | 45 | 25 | 35 | 45 | B. C. |
| P.W.D. No. 304 | 2 | 12″x12″x30′ | Fir | 38 | 12″x12″ | Fir | 2 | Orange Peel | (1)¾ (1)½ | American Hoist & Derrick Co | 10 | 2 | 0 | 26 | 0 | 6 | 170 | 15 | 20 | 20 | 20 | 20 | 20 | B. C. |
| P.W.D. No. 309 | 2 | 12″x12″x30″ | Fir | 48 | 11½″x13½″ | Fir | 1 | Orange Peel | ¾ | American Hoist & Derrick Co | 12 | 2 | 0 | 33 | 0 | 6 | 235 | 20 | 27 | 27 | 27 | 27 | 27 | B. C. |
| P.W.D. No. 313 | 2 | 12″x12″x60″ | Fir | 48 | 18″x18″ | Fir | 1 | Orange Peel | 1½ | Hayward | 50 | 2 | 6 | 28 | 0 | 5 | 235 | 20 | 30 | 30 | 20 | 20 | 30 | B.C. |
| | 3 | 14″x14″x36′ | Wood | [4]60 | 14″x14″ | Wood | 2 | (1) Orange Peel (1) Clam shell | 2 | Hayward | 14 | 3 | 0 | 33 | 6 | 9 | 585 | 40 | 90 | 90 | 60 | 70 | 90 | B.C. |

Hard. [2]And 60′. [4]And 40′.

## DEPARTMENTAL SNAGBOATS, 1915.

| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost Equipped. | Present Estimated Value. | Hull. Material. | Hull. Length, B. P. | Hull. Beam. | Hull. Working Draft. | Fuel Capacity. | Kind of Fuel. | Average fuel consumption per day of 10 hrs. | Boilers. Number. | Boilers. Type. | Boilers. Diameter. | Boilers. Length. | Boilers. Horse Power. | Hoisting Engines. Size. | Hoisting Engines. Type. | Hoisting Engines. Maker. | Propelling Engines. Number. | Propelling Engines. Size. | Propelling Engines. Type. | Propelling Engines. N. H. P. | Propelling Engines. Diameter of wheel. | Buckets. Length. | Buckets. Width. | Revolutions per minute. | Speed per hour. | Length of Boom. | Height of Frame. | Number of crew. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $ | $ | | ' | ' | '' | | | Lb. | | | " | " | | | | | | | | | | | | | M | | | |
| Muskrat | | | 1892 | Golden, B.C. | | 7,500 | 3,500 | Wood | 84 | 20 | 1 4 | 10 tons | Soft coal | 1,200 | 1 | Vertical | 15 | 44 | | 8"x12" | Simple | | [1] | | | 15 | ' | 15 | 10 | 20 | 5 | | 22 | 7 |

[1]Hoisting engines used.

## DEPARTMENTAL DRILL SCOWS, 1915.

| Number. | When Built. | Where Built. | Builder. | Cost Equipped. | Present Estimated Value. | Hull. Material. | Hull. Length. | Hull. Beam. | Hull. Depth. | Hull. Draft. | Spuds. Number. | Spuds. Size. | Spuds. Material. | Compressor. Size. | Compressor. Type. | Gas Engine. Type. | Gas Engine. Horse Power. | Fuel. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ | $ | | ' | ' | ' | '' | | | | | | | | | |
| 2 | | | | 3,096 | | | 36 | 6 27 | 7 | 2 6 | 2 | 12"x12"x60' | Fir | 10"x12" | Canadian Ingersol Rand. | Hor. Foos Engine Co. | 40 | No. 1 Distillate or Coal Oil. | House & Mach'y installed by Victoria Mach'y. Depot in 1913. |
| 1 | 1911 & 12 | Victoria, B.C. | Alex. Watson. | [2]3,350 | 3,000 | Wood & iron. | 32 | 0 20 | | | | 12"x12"x45' | Fir | | | | | | [1]Two scows. [2]For 2 scows. |

## DEPARTMENTAL LOBNITZ ROCK BREAKERS, 1915.

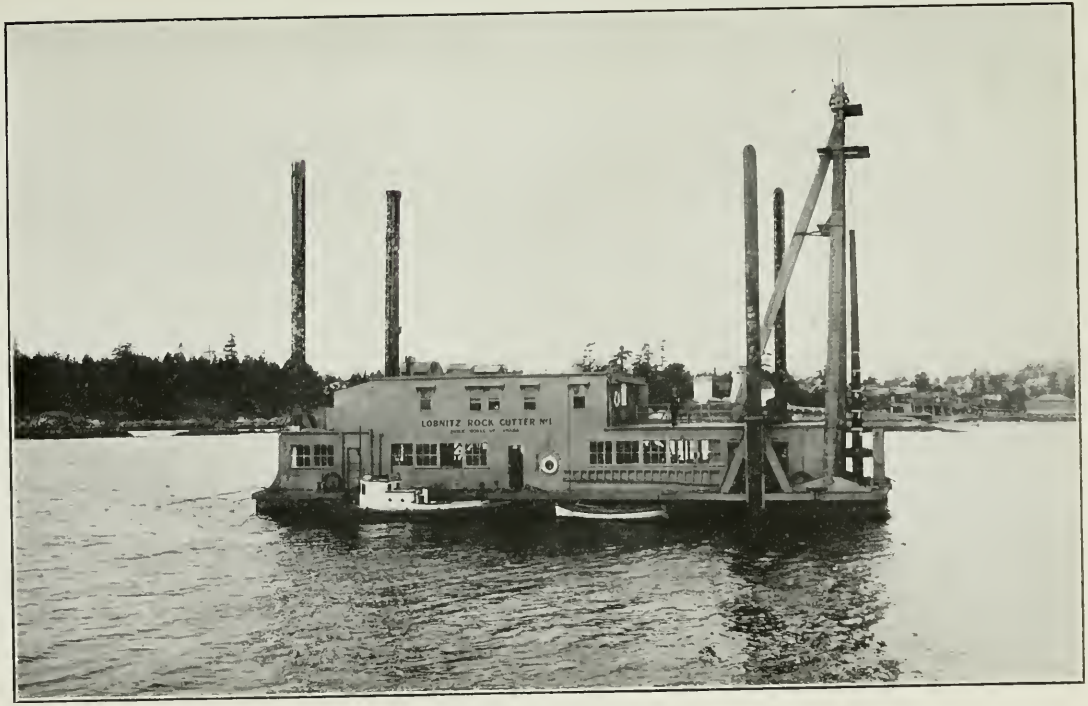
| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost equipped. | Present estimated Value. | Hull. | | | | Fuel. | | | Boiler. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Length O. A. | Beam O. A. | Working Draft. | Capacity. | Kind. | Average consumption per day, 10 hrs. | Number. | Type. | Diameter. | Length. | Horse power. |
| | | | | | | $ | $ | | ′ | ″ | ′ | | | | | | ″ | ″ | |
| P.W.D. Lobnitz No.1 | 130,895 | 222 | 1911 | Renfrew, Scotland | Lobnitz & Co. | 70,000 | 60,000 | Steel | 100 | 36 0 | 5 | 210 bbls. | Crude oil. | 17 bbls. | 1 | Scotch | 9 0 | 8 6 | |
| P.W.D. Lobnitz No. 2 | | | 1914 | Renfrew, Scotland | Lobnitz & Co. | 61,300 | 61,300 | Steel | 100 | 36 0 | 5 | 30 tons | Coal | 2 tons | 1 | Scotch | 8 8 | 8 8 | |
| P.W.D. Lobnitz No. 3 | 133,760 | G438-39 R388-79 | 1912 | Renfrew, Scotland | Lobnitz & Co. | 62,630 | 54,500 | Steel | 100 | 36 2 | 5 | 65 tons | Soft coal | 2 tons | 1 | Scotch | 9 0 | 6 8 | |

| Name. | Engine. | | Auxiliaries. | | | | Condenser. | | Anchor Spuds. | | | Working Depth. | | Breaker. | | | | Number of Crew. | Where employed. | Erected by. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Spuds. | | Manœuvering. | | | | | | | | | | | | | | | |
| | Size. | Type. | Number. | Size. | Number. | Size. | Size. | Type. | Number. | Size. | Material. | Maximum. | Minimum. | Weight. | Position on Hull. | Minimum Drop. | Maximum Drop. | | | |
| | | | | | | | | | | | | ′ | ′ | | | ′ | ′ | | | |
| P.W.D. Lobnitz No. 1 | 12-12″x15″ | Simple | 3 | 6″x6″ | 2 | 7″x12′ | | Wheeler Surface | 3 | 2′x2′x60′ | Fir | 40 | 8 | 45,000 lb. | Bow | 6 | 12 | 14 | B. C. | Victoria Mach'y Depot. |
| P.W.D. Lobnitz No. 2 | 12″x15″ | Simple | 3 | 6″x6″ | 2 | 7″x12″ | | Wheeler Surface | 3 | 2′x2′x60′ | Fir | 42 | 12 | 45,000 lb. | Bow | 6 | 10 | 8 | B. C. | Morgan & Co., Vancouver. |
| P.W.D. Lobnitz No. 3 | 12″x14″ | Simple | | | 2 | 7″x12″ | 2′2″x4′8″ | Surface | | | | 40 | 10 | 21 tons | Centre | 1 | 15 | 9 | Mar. Prov. | |

## DEPARTMENTAL STONELIFTERS, 1915

| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost equipped. | Present estimated Value. | Hull. Material. | Length O.A. | Beam. | Working Draft. | Fuel. Capacity. | Kind. | Average consumption per day of 10 hrs. | Boiler. Number. | Type. | Diameter. | Length. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $ | $ | | ′ | ″ ″ | ′ | | | | | | ″ | ′ |
| P.W.D. Stonelifter No. 1 | | | | | | 41,779 | | Steel | 112 | 34 0 | 5 | 20 tons | Soft coal | 2 tons | 1 | Scotch | 7 6 | |
| P.W.D. Stonelifter No. 101 | | | 1901 | Grandes Piles | P.W.D. | 1,200 | 2,500 | Wood | 41 | 23 10 | *a* 2 | | | | | | | |
| P.W.D. Stonelifter No. 102 | | | | Ottawa, Ont. | P.W.D. | 3,000 | 1,000 | Wood | 46 | 24 0 | 2 | 3 tons | Soft coal | ½ ton | 1 | Upright | 2 10½ | 6 |

| Name. | Hoisting Engines. Size. | Type. | Make. | Horse Power. | Condenser. Size. | Type. | Maximum Capacity. | Working Depth. Maximum. | Minimum. | Anchors. Number. | Type. | Size of Hoisting Cable. | Material of Overhead Frame. | Max. Width of Grips. | Where Employed. | Number of Crew. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ′ | ′ | | | ″ | | ′ ″ | | | |
| P.W.D. Stonelifter No. 1 | (2) 9″x10″ | Simple | | | | | 50 tons | | | 6 | Fluke | 1⅛ | Steel | 14 6 | Mar. Prov | 10 | |
| P.W.D. Stonelifter No. 101 | *b* | | | | | | 40 tons | 7 | 2 | 4 | Hand Crane | ⅝ | Pitch Pine | 5 6 | Ont. and Que. | 15 | *a* 3′6″loaded. *b* Hand Winch. |
| P.W.D. Stonelifter No. 102 | *c* | Simple | Beatty | | | | 6 tons | 14 | 2 | 4 | Hand Ratchet | ⅜ & ½ | Fir and Oak | 9 0 | Ont. and Que. | 2 | *c* Double engines. |




Lobnitz Rock Cutter, No. 1., B.C.

## DEPARTMENTAL FLOATING PILE DRIVERS, 1915.

| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost equipped. | Present estimated Value. | Hull. | | | | | Fuel. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Length. | Beam. | Depth. | Working Draft. | Capacity. | Kind. | Average consumption per day of 10 hrs. |
| | | | | | | $ | $ | | ' | ' " | ' " | ' | | | |
| ..... | ..... | ..... | 1908 | Selkirk, Man. | P.W.D. | 2,000 | 1,000 | Wood | 60 | 22 0 | 3 6 | 12 | 2 tons | Coal | ..... |
| Kuspidor | ..... | 23 | 1912 | Chase, B.C. | P.W.D. | 2,250 | 2,025 | Wood | 46 | 16 0 | 3 0 | 12 | ..... | Wood | ½ cord |
| No. 1 | ..... | 50 | ..... | Golden, B.C. | ..... | ..... | 1,000 | Wood | 50 | 18 0 | 3 6 | 18 | 5 cords | Wood | ½ cord |
| No. 3 | ..... | 50 | 1911 | Nakusp, B.C. | S. Mills | 2,600 | 2,500 | Wood | 50 | 18 3 | 4 6 | 20 | 6 cords | Wood | ½ cord |
| No. 6 | ..... | 80 | 1913 | Nelson, B.C. | George Hale | 2,400 | 2,400 | Wood | 60 | 20 0 | 4 0 | a40 | 10 cords | Wood | ½ cord |

| Name. | Boiler. | | | Hoisting Engine. | | | Leads. | | Weight of Hammer. | Weight of Cap. | Distance between Leads. | Number of Crew. | Where employed. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type. | Diameter | Length. | Size. | Type. | Maker. | Height. | Size. | | | | | | |
| | | ' " | ' " | | | | ' | | Lb. | Lb. | - | | | |
| ..... | a ..... | | | | | | 32 | 6"x8" | 2,000 | 400 | 16 | 4 | Man., Sask., Alta. | a Boilers and Engine 6"x10" American |
| Kuspidor | Vertical | 2 9 | 6 1 | 5½x8" | Simple | American Hoist & Derrick Co. | 40 | 6"x12" | 2,000 | ..... | 16 | 6 | B.C. | Hoist. |
| No. 1 | a ..... | | | | | | 40 | 6"x8" | 1,800 | ..... | 20 | 7 | B.C | a Driven from Snag boat Muskrat. |
| No. 3 | Vertical | 3 0 | 7 0 | (2) 6¼"x10" | Simple | American Hoist & Derrick Co. | 60 | (6"x8" Top, 6"x10" Bot.) | 2,200 | ..... | 16 | 6 | B.C. | |
| No. 6 | Vertical | 2 6 | 7 0 | (2) 6"x10" | Simple | J. S. Mundy b | 50 | 6"x12"x50' | 2,200 | ..... | 18 | 4 to 8 | B.C. | a 10" light. b Newark, N.J., U.S.A. |

## DEPARTMENTAL DERRICK SCOWS, 1915.

| Number. | When Built. | Where Built. | Builder. | Cost equipped. | Present estimated Value. | Hull. | | | | | | | | | Engines. | | Boiler. | | | | Coal consumption per day, 10 hrs. | Used in connection with. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Material. | Thickness of Sides. | Thickness of Bottom. | Thickness of Deck. | Length | Beam | Depth. | Draft, Light. | Draft, Loaded. | Number | Size. | Type. | Type. | Diameter. | Length. | Working Pressure | | | |
| | | | | $ | $ | | " | " | ' | ' " | ' " | ' " | ' " | ' | | | | | ' " | ' | Lb | | | |
| a1 | 1911 | Vancouver, B.C., yard. | Vancouver Shipyards, Ltd. | 715 | 375 | Wood | 4 | 2½ | 2 | 32 0 | 11 | 2 8 | 0 6 | 2 | | | | | | | | P.W.D. No. 306. | a Used as water scow. |
| a2 | 1911 | Victoria, B.C. | Alex. Watson. | 720 | 375 | Wood | 4 | 2½ | 2 | 32 0 | 12 | 2 6 | 0 11 | 2 | | | | | | | | P.W.D. Lobnitz No. 1. | a Used for taking up anchors and furnishing water. |
| a3 | 1914 | Vancouver, B.C. | W. Menchions. | 700 | 700 | Wood | 4 | 2½ | 2 | 32 4 | 12 | 2 6 | 0 10 | 2 | | | | | | | | P.W.D. Lobnitz No. 2. | a Used for taking up anchors and furnishing water. |
| 4 | 1911 | North Vancouver, B.C. | Wallace Shipyards, Ltd. | 6,400 | 6,600 | Wood | 6 | 4 | 3 | 70 0 | 26 | 8 8 | 3 0 | 6 | 1 | (2) 8"x8" | Simple. | Vertical | 3 6 | 8 | 100 | ¼ ton. | P.W.D. No. 306 | |

DEPARTMENTAL INSPECTION BOATS, 1915.

| Name. | Official Registry Number. | Registered Tonnage. | When Built. | Where Built. | Builder. | Cost Equipped. | Present Estimated Value. | Hull. | | | | | Average Speed. | Engines. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Length O. A. | Beam Amidship. | Depth. | Working Draft. | | Number. | Size. | Type. | Make. | I. H. P. |
| | | | | | | $ | $ | | ′ | ″ | ′ | ″ | | | | | | |
| *Victoria | | | 1905 | Selkirk, Man. | P. W. D | | 6,000 | Wood | 60 | 14 6 | 9 | 7 0 | 8 M.p.h. | 1 | 8″ & 16″x12″ | [1]Compound | Doty | |
| Athel | | | 1910 | Vancouver, B.C. | Vancouver Shipyard, Ltd. | 4,540 | 4,086 | Wood | 44 | 9 6 | 4 | 1 8 | 10 M.p.h. | 1 | | [1]Gasoline | Buffalo | 30 |
| Marion | | | 1913 | Nelson, B.C | George W. Hale | 3,350 | 3,300 | Wood | 35 | 7 0 | 5 | 2 6 | 12 M.p.h. | 1 | 4¼″x5½″ | [1]Gasoline | Niagara | 25 |
| Walrondo | 133710 | 30 | 1912 | Hong Kong | W. S. Bailey & Co. | 12,000 | 12,000 | Teak | 60 | 13 0 | 7 | | | 2 | | Gasoline | | 20 |

| Name. | Boilers | | | | | Propellers. | | Fuel. | | | Number in Crew. | Sleeping accommodation for. | Size of Life Boat. | Number of Life Belts. | Where Used. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number. | Type. | Diameter. | Length | Horse Power. | Number. | Size. | Capacity. | Kind. | Average consumption per day, 10 hr. | | | | | | |
| | | | ″ | ′ | | | | | | | | | | | | |
| *Victoria | 1 | Fitzgibbon | 24 6 | 8 | | 1 | 4′ 6″ | 7 tons. | Coal | 1 ton | 4 | 9 | 14′x4′6″ | 12 | Man., Sask., Alta. | [1]Condensing. [2]7′6″ H. *Also used as Tug |
| Athel | | | | | | 1 | 2′ | 100 gals. | Gasoline | 20 gals. | 1 | 4 | [2]16′ | 4 | B. C. | [1]Four cycle. [2]Dinghy. |
| Marion | | | | | | 1 | 22″ | 50 gals. | Gasoline | 25 gals. | 1 | 4 | 18′ | 2 | B. C. | [1]Medium Duty. |
| Walrondo | | | | | | 2 | | | Gasoline | | | | 12′ | | B. C. coast | |

| Name. | Official Registry Number. | Tonnage. | When Built. | Where Built. | Builder. | Cost Equipped. | Present Estimated Value. | Hull: Material. | Hull: Length between perpendicular | Hull: Beam | Hull: Amidship Working Draft. | Fuel Capacity. | Kind of Fuel. | Average fuel consumption per day of 10 hours. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $ | $ | | ′ ″ | ′ ″ | ′ ″ | | | |
| Helena | 133,758 | 95·83 | 1907 | Collingwood, Ont | Collingwood Shipbuilding Co | 52,500 | | Stee | 111 0 | 23 0 | 11 3 | 90 tons | Soft coal | 3½ tons. |
| Lisgar | 126,493 | 118 | 1908 | Sorel, Que | Pontbriand Co., Ltd | 47,500 | 45,000 | Steel | 95 0 | 22 0 | 11 0 | 50 tons | Soft coal | 1½ tons. |
| Canso | 126,803 | G.225·06, R.47·24 | 1910 | Yarmouth, N.S. | New-Burrell-Johnson Iron Co., Ltd. | 46,500 | 45,000 | Steel | 91 0 | 22 0 | 10 6 | 50 tons | Soft coal | 3½ tons. |
| Fredericton | 131,137 | G.109·21, R.46·76 | 1913 | Toronto, Ont | Polson Iron Works | 31,930 | | Steel | 82 0 | 20 0 | 9 0 | 20 tons | Soft coal | 2 tons. |
| Sogenada | 126,766 | G. 64·33, R.5·83 | 1909 | Rutherglen | William Chalmers & Co | 20,000 | | Steel | 73 5 | 15 6 | 10 0 | 14 tons | Soft coal | 2 tons. |
| Mabel Reid | 122,597 | G.62·82, R.17·06 | 1887 | Freeport, Me | | 7,000 | 7,000 | Wood | 63 0 | 15 9 | 8 0 | 7 tons | Soft coal | 2 tons. |
| Rona | 112,348 | G.70·05, R.42·47 | 1903 | Liverpool, N.S. | Robie S. McLeod | 8,000 | 8,000 | Wood | 80 6 | 20 0 | 8 0 | 6 tons | Soft coal | 2 tons. |
| Eileen | | | 1907 | Buckingham, Que. | W. H. Kelly | 6,800 | 4,500 | Wood | 40 0 | 13 6 | 5 8 | 4 tons | Soft coal | 1 ton |
| Alva | 111,447 | 22 | 1901 | Ottawa, Ont | Capt. Henry Shaver | 5,500 | 4,000 | Wood | 50 0 | 13 2 | 5 11 | 5 tons | Soft coal | 1 ton |
| Sir John | 133,939 | 40·72 | | Sorel | P. W. D | 10,000 | 9,000 | Wood | 81 2 | [9]18 10 | 8 0 | 16 tons | Soft coal | 1 ton. |
| Mina G | 126,529 | G. 23, R' 14 | 1910 | Buckingham, Que. | W. H. Kelly | 7,865 | 5,000 | Wood | 45 0 | 13 6 | 6 0 | 4 tons | Soft coal | 1 ton |
| Aylmer | | | 1910 | Toronto, Ont | Polson Iron Works | 8,475 | 7,000 | St.and wood | | 11 6 | 4 4 | 5 tons | Soft coal | 1 ton |
| Hercules | 122,217 | 96·75 | 1900 | Toronto, Ont | Polson Iron Works | 70,000 | 60,000 | Steel | 97 0 | 23 0 | 10 6 | 60 tons | Soft coal | 3½ tons |
| Archie Stewart | 96,718 | G. 80, R. 50 | 1890 | Ottawa | | | | Wood | 85 0 | 18 0 | 8 4 | 18 tons | Soft coal | 5 tons |
| Marie Louise | | 12·01 | 1899 | Roberval, Que | Beauchemin & Fils | | 3,000 | Wood | 50 0 | 15 0 | 4 6 | | Wood, coal | 1½ cords |
| Maggie K | 131,132 | G.24·73, R.12·55 | 1912 | Buckingham, Que. | See remarks[2] | 7,000 | 6,000 | Wood | 46 0 | 13 0 | 6 0 | | Soft coal | |
| Cliffside | 126,405 | 22 | 1909 | Ottawa, Ont | J. Hall | 9,000 | 7,000 | Wood | 70 9 | 16 8 | 6 4 | 15 tons | Soft coal | 4 tons. |
| St. Paul | 71,641 | G.45, R.28 | 1875 | Montreal | | | 9,000 | Wood | 52 0 | 16 0 | 9 6 | 14 tons | Soft coal | 1½ tons. |
| Monitor | 107,891 | G.61·59, N.39·13 | 1898 | Montreal, Que | J. & R. Weir | 12,500 | 11,000 | Steel | 60 6 | 16 0 | 8 0 | 16 tons | Soft coal | 2½ tons. |
| Storm King | 88,683 | 73 | 1885 | Portland, N.B | | 22,000 | 18,000 | Wood | 92 0 | 19 0 | 12 0 | 28 tons | Soft coal | 2½ tons. |
| Peel | 126,683 | 116·73 | 1909 | Sorel, Que | Pontbriand Co | 47,500 | 45,000 | Steel | 91 0 | 22 0 | 9 6 | 45 tons | Soft coal | 2½ tons. |
| Dora | 96,710 | G.48, R.44 | 1889 | Operican, Que | Alex. Miller | 3,000 | 4,000 | Wood | 56 0 | 11 6 | 6 6 | 6 tons | Soft coal | 1 ton. |
| Ottawa | 94,628 | G.21, R.14 | 1888 | Ottawa, Ont | | | 4,000 | Wood | 1 | [4] | 6 10 | 6 tons | Soft coal | 1 ton. |
| Trudeau | 133,940 | G.81·04, R.55·11 | 1897 | Sorel, Que | P. W. D | | 9,000 | Wood | 80 0 | 18 6 | 7 10 | 12 tons | Soft coal | 2 tons. |
| Annette | | | | Sorel, Que | Beauchemin & Cie | | 5,000 | St.and wood | 59 0 | 12 0 | 3 6 | 6 tons | Soft coal | 2½ tons. |
| Fashion | 122,010 | G.43·10, N.26·58 | 1893 | W. Bay City, Mich | | 8,000 | 3,500 | Wood | 52 0 | 16 0 | 7 6 | 8 tons | Soft coal | 2½ tons. |
| Blanche | 71,269 | G.28, R.19 | 1872 | Deseronto, Ont | | | 3,000 | Wood | 50 0 | 9 0 | 4 0 | 4 tons | Soft coal | 2½ tons. |
| Daisy | 100,465 | G.15, R.10 | 1893 | Quebec, Que | | 1,200 | 7,500 | Wood | 52 0 | 11 0 | 5 0 | 4 tons | Soft coal | 2½ tons. |
| Delisle | 61,134 | G.46, R.17 | 1869 | Buffalo, N.Y | | | 12,000 | Wood | 62 4 | 14 8 | 7 4 | 7 tons | Soft coal | 4 tons. |
| Lion | | | | | | | 800 | Wood | 35 0 | 8 0 | 3 0 | ½ ton | Soft coal | ½ ton. |
| J G. Witherbee | 122,251 | G.165, R.82 | 1872 | Philadelphia, Pa | | | 15,000 | Iron | 111 2 | 22 0 | 11 0 | 15 tons | Soft coal | 4 tons. |
| Lisgar | 122,272 | G.26, R.18 | 1010 | Selkirk, Man | P. W. D | 2,772 | 2,000 | Wood | 44 0 | 13 6 | 5 0 | 7 tons | Soft coal | ¾ ton |
| Peguis | | | 1912 | Selkirk, Man | P. W. D | 9,066 | 8,000 | Wood | 58 0 | 15 0 | 6 0 | 8 tons | Soft coal | 1½ tons |
| Friday | | | 1911 | Selkirk, Man | P. W. D | 8,250 | 7,000 | Wood | 58 0 | 15 0 | 6 0 | 8 tons | Soft coal | 1½ tons |
| Carberry | 112,293 | G.62, R.42 | 1903 | Westbourne, Man | | 10,000 | 9,000 | Wood | 69 8 | 16 5 | 5 0 | 2 cords | Wood | 2 cords |
| Point Ellice | 130,897 | G.162·67, R.69·40 | 1911 | North Vancouver, B.C. | McDougall Jenkins | 48,700 | 44,000 | Steel | 91 6 | 20 0 | 11 6 | 98 bbls | Crude oil | 10 bb.ls |
| Point Garry | 134,303 | G.19, R.13 | 1011 | Vancouver, B.C | Vancouver Shipyard | 9,315 | 8,000 | Wood | 45 0 | 10 6 | 6 6 | 380 gals | No. 1 distillate | 50 gals |
| Point Grey | 130,917 | 162·16 | 1912 | North Vancouver, B.C. | Wallace Shipyards Ltd | 69,800 | 63,000 | Steel | 93 4 | 22 3 | (F. 11\ (A.14.5 | 315 bbls | Oil | 10 bbls |
| Point Hope | 130,310 | 44·93 N. | 1910 | Vancouver, B.C | | 17,000 | 14,500 | Wood | 65 0 | 16 0 | 9 6 | 20 tons | Soft coal | 1½ tons |
| Petrel | 121,974 | G.134, N.58 | 1906 | Victoria, B.C | Victoria Mach'y Depot | 35,000 | 24,000 | Steel | 86 4 | 17 0 | 12 3 | 50 tons | Soft coal | 3½ tons |
| Le Pas | | | 1914 | Selkirk | P. W. D | 6,000 | 6,000 | Wood | 54 0 | 12 0 | 5 0 | 4 tons | Soft coal | 1 ton |

[9] Over all. [2] Estella Ann Kearney, wife of W. H. Kelly. [3] 57′ O. A. [4] 13′ 6″ O. A. [3] Rebuilt 1914 at Ottawa, Ont. [6] Rebuilt 1914 at Ottawa, Ont.

| Name. | Engines | | | | Boilers. | | | | Condenser. | | Size Towing Propeller. | Number of Crew. | In attendance on. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number. | Type. | Size. | I. H. P. | Make. | Number. | Type. | Diameter. | Length. | Size. | Type. | | | |
| | | | | | | | | ′ ″ | ′ ″ | | | | | |
| Helena | 1 | Triple expansion | 14½″, 35″& 40″x25″ | 1470 | | 1 | Scotch | 13 6 | 11 0 | 2@8′3″x3′4″x1′11″ | Surface | 9′6″ D. x 11′ P. | 11 | P.W.D. No. 1. |
| Lisgar | 1 | Triple expansion | 12″, 19″ & 30″x20″ | 400 | | 1 | Scotch | 9 6 | 10 0 | 3@9′x3′x2′ | Surface | | 12 | P.W.D. No. 6. |
| Canso | 1 | Triple expansion | 12″, 19″ & 30″x20″ | 4300 | New-Burrell-Johnson I. Co. | 1 | Scotch | 10 10 | 9 3 | 3674 sq. ft. | Surface | 7′6″ | 11 | P.W.D. No. 2. |
| Fredericton | 1 | Compound | 12″ x 26″x18″ | | Polson Iron Works | 1 | Scotch | 10 0 | 11 0 | 6@5′x2′6″x3′ | Surface | | 8 | P.W.D. No. 3. |
| Sogenada | 1 | Compound | 14″ & 30″x21″ | 200 | James Ritchie Patrick | 1 | Scotch | 9 0 | 9 0 | 6′x4′x2′ | Surface | | 7 | |
| Mabel Reid | 1 | Compound | 10″x18″x14″ | | | 1 | Vertical | 6 2 | 9 4 | 7@5″x5′3″ | Surface | 5′2″ D | 3 | P.W.D. No. 14. |
| Rona | 1 | Compound | 10″ & 20″x16″ | | New-Burrell-Johnson I. Co. | 1 | Upright | 5 2 | 9 6 | 5′4″x18″x22″ | Surface | 5′0″ | 6 | P.W.D. No. 4. |
| Eileen | 1 | Simple | 12″x12″ | | Orr & Sembower | 1 | Scotch | 6 6 | | 8 | | 4′4″ | 3 | P.W.D. No. 102. |
| Alva | 1 | Compound | 9¼″ & 17¾″x12″ . r | | Low Bros | 1 | Fitzgibbon | 9¼ 7 | 8 1 | 7″x9″x12″ | Jet | 4′5″ | 8 | P.W.D. No. 103. |
| Sir John | 1 | Simple | 16″x20″ | | | 1 | Fitzgibboa | 10 | 10 8 | | | 6′ | 3 | P.W.D. No. 105. |
| Mina G | 1 | Simple | 12″x12″ | | | 1 | Scorch | 6 0 | 9 0 | | | 4′7″ | 3 | P.W.D. No. 106. |
| Aylmer | 2 | Simple | 6″x7″ | | | 1 | Fitzgibbon | 11 | 6 0 | | | 2′ of 3′ | | P.W.D. No. 108. |
| Hercules | 1 | Triple expansion | 13½″, 22″& 36″x21″ | | Polson Iron Works | 1 | Scotch | 10 6 | 12 6 | 8′6¼″x2′5½″ | Surface | 8′ | 8 | P.W.D. No. 109. |
| Archie Stewart | 1 | Simple | 21″x18″ | | J. & R. Weir | 1 | Square Fire Box | 7 3 | 12 4 | | | 6′6″ | 6 | P.W.D. No. 110. |
| Marie Louise | 2 | Simple | 8″x9″ | | F. X. Drolet | 1 | Horizontal | 4 0 | 4 0 | | | 3′4′. | 3 | P.W.D. No. 111. |
| Maggie K | 1 | Simple | 12″x12″ | | | 1 | Retura Tubular. | 13 | 7 5 | | | 4′4″ | 3 | P.W.D. No. 112. |
| Cliffside | 1 | Simple | 15″x15″ | | J. & R. Weir | 1 | Fitzgibbon | 14 | 9 3 | | | 5′4″ | 3 | P.W.D. No. 113. |
| St. Paul | 1 | Compound | 12″ & 24″x18″ | | Knight & Gibson | 1 | | 15 | 12 0 | 3′x14″ | Jet | 6′1″ | 3 | P.W.D. No. 114. |
| Monitor | 1 | 3 Cyl. Simple | 12″x18″ | | J. & R. Weir | 1 | Scotch | 8 6 | 9 7 | | Wheeler Surface | 6′2″ | 7 | P.W.D. No. 115. |
| Storm King | 1 | Compound | 16″ & 32″x24″ | | F. X. Drolet | 1 | Scotch | 10 0 | 12 0 | | Surface | 8′ | 9 | P.W.D. No. 116. |
| Peel | 1 | Triple expansion | 12″, 19″ & 30″x20″ | | McKie & Baxter | 1 | Scotch | 9 9 | 11 11 | 3@10′ long | Surface | 10′6″ | 8 | P.W.D. No. 117. |
| Dora | 1 | Simple | 10″x12″ | | | 1 | Tug | 4 2 | 5 8 | 0 | | 4′6″ | 3 | P.W.D. No. 118. |
| Ottawa | 1 | Compound | 11″ & 20″x16″ | | J. & R. Weir | 1 | Fitzgibbon | 8 4 | 6 9 | 0 | Wheeler Surface | 5′6″ | 3 | P.W.D. No. 119. |
| Trudeau | 1 | Simple | 16″x18″ | | Lockport, N.Y | 1 | Tug | 9 6 | 10 12 | 3 | | 6′ | 3 | P.W.D. No. 120. |
| Annette | 1 | Compound | 5″ & 10″x12″ | | Beauchemin & Cie | 1 | Upright | 4 6 | 7 6 | 4′x6′ | Surface | 3′ | 4 | P.W.D. No. 122. |
| Fushion | 1 | Compound | 14″ & 24″x13″ | | F. W. Wheeler Co | 1 | Fitzgibbon | 5 9 | 6 3 | | Jet | 6′ | 3 | P.W.D. No. 123. |
| Blanche | 1 | Simple | 10″x12″ | | | 1 | Fitzgibbon | | | | | 3′6″ | 3 | |
| Daisy | 1 | Simple | 9″x10″ | | | 1 | Fitzgibbon | 2 6 4 | 0 6 | 6 | | 4′ | 3 | |
| Delisle | 1 | Simple | 18″x20″ | | Bell Steam Engine Works | 1 | Tug | 2 6 | 6 12 | 0 | | 6′2″ | 3 | |
| Lion | 1 | Compound | 4″ & 8″x6″ | | F. X. Drolet, Que | 1 | Upright | 3 4 | 5 0 | 2½″ pipe | Keel | 35″ | 2 | |
| J. G. Witherbee | 1 | Compound | 18″ & 36″x24″ | | | 1 | Tug | 2 9 9 | 0 | 3′x4′9″ | Admiralty | 8′4″ | 5 | |
| Lisgar | 1 | Simple | 9″x9″ | | Doty | 1 | Scotch | 5 0 | 7 0 | | | 3′6″ | 4 | P.W.D. No. 202. |
| Peguis | 1 | Simple | 12″x12″ | | Doty | 1 | Scotch | 6 0 | 8 0 | | | 5′ | 4 | P.W.D. No. 204. |
| Friday | 1 | Simple | 12″x12″ | | Doty | 1 | Scotch | 6 0 | 8 0 | | | 5′ | 4 | P.W.D. No. 205. |
| Carberry | 2 | Simple | 10″x10″ | | Doty | 1 | Scotch | 7 0 | 9 0 | | | 2′-4′ | 4 | |
| Point Ellice | 1 | Compound | 16″ & 34″x24′ | 500 | Ross & Duncan | 1 | Scotch | 12 0 | 11 0 | 23 | Surface | 8′6″ D., 10′ P | 24 14 | P.W.D. No. 301. |
| Point Garry | 1 | 26 Imperial | 3-8½″x10½″ | | Imperial | | | | | | | 4′1″ | 2 | P.W.D. No. 305. |
| Point Grey | 1 | Compound | 17″ & 30″x27″ | 600 | Campbell & Culderwood | 1 | Scotch | 14 2 | 12 1½ | 26 | Surface | 10′ | 27 14 | P.W.D. No. 306. |
| Point Hope | 1 | Compound | 9¼″ & 20″x14″ | 135 | John Doty | 1 | Scotch | 7 8½ | 9 11 | 4′4″x2′ | Surface | 5′ | 28 10 | P.W.D. No. 307. |
| Petrol | 1 | Compound | 11″ & 24″x16″ | 250 | Victoria Mach'y Dep | 1 | Scotch | 9 6 | 10 10 | 29 | Surface | 7′6″ | 6 | Dr'd'g. Plant at Victoria, B.C. |
| Le Pas | 1 | High Pressure | 9″x9″ | | Doty | 1 | Scotch | 5 0 | 7 0 | | | 3′8″ | 4 | P.W.D. No. 208. |

[1] Full 650. [2] Cooling surface 800 sq. ft. [3] 500 ¾″ tubes. [4] By calculation. [5] 589 tubes 7′ long x¾″ dia. [6] 600 tubes. [7] 216 tubes. [8] Heater. [9] Wide. [10] Over all. [11] 4′ W., 6′ H. [12] 6′ 1″ high. [13] 4′ 7″ W. x 7′ 4″ H. [14] 4′ 9″ W. x 8′ 4½″ H. [15] 6′ W. x 7′ H. [16] 427-¾″ tubes, 608·5 sq. ft. cooling surface. [17] 7′ 4″ H. [18] Wide x 7′ H. [19] Wide x 8′ 6″ H. [20] Wide, 6′ H. [21] Wide, 9′ H. [22] Wide x 13′ H. Dome 5′ 2½″. [23] 185 sq. ft. cooling surface. [24] 2 shifts. [25] San Francisco, 3 Cyl ,4 Cycle Gasoline Engine [26] 806 sq. ft. cooling surface. [27] 2 shifts. [28] 2 shifts. [29] 260 sq. ft. cooling surface

## DEPARTMENTAL GASOLINE TENDERS, 1915.

| Name | Official Registry Number. | Registered Tonnage. | When Built. | Where Built. | Builder. | Cost Equipped. | Present estimated Value. | Hull | | | | | Average Speed. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material | Length, O. A. | Beam Amidship. | Depth. | Working Draft | |
| | | | | | | $ | $ | | ′ | ″ | ′ ″ | ′ ″ | |
| Runabout | | | 1914 | New Westminster, B.C. | Westminster Marine Rys. | 5,870 | 5,870 | Wood. | 40 | 11 | 4 4 | 4 6 | 9½ M.p.h. |
| Knockabout | | | 1913 | Vancouver, B.C | W. Menchions | 5,500 | 5,000 | Wood. | 40 | 11 | 4 4 | 4 6 | 9½ M.p.h. |
| Roustabout | | | 1911 | Vancouver, B.C. | Vancouver Shipyards, Ltd | 2,900 | 2,100 | Wood. | 31 | 9 | 3 10 | 4 0 | 7½ Knots. |

| Name. | Engines. | | | | | Propellers. | | Fuel. | | | Number in crew. | Sleeping accommodation for. | Size of life Boat. | Number of Life Belts. | Where Used. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number. | Size. | Type. | Make. | I.H.P. | Number. | Size. | Capacity. | Kind. | Average consumption per day, 10 hr. | | | | | | |
| Runabout | 1 | | Gasoline. | San Francisco Standard | 40 | | 37″ | 450 gal. | No. 1 distillate | 35 gal | 1 | | | 4 | B.C. | [1] 3 cyl., 4 cycle. |
| Knockabout | 1 | | Gasoline. | Corliss | 35 | 1 | 37″ | 450 gal | No. 1 distillate | 33 gal | 1 | | | 4 | B.C. | [2] 3 cyl. |
| Roustabout | 1 | 6x7½ | Gasoline[1]. | Buffalo "Heavy Duty" | [2]24 | 1 | 29″ D. x 34″ P. | 90 gal. | No. 1 distillate | 22½ gal | 1 | | | 1 | B.C. | [1] 4 cyl. [2]B.H.P. |

DEPARTMENTAL LAUNCHES, 1915.

| When Built. | Where Built. | Built by. | Cost. | Present value | Hull. | | | | Engine. | | Fuel. | In connection with. | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Material. | Length. | Beam. | Depth. | Type. | Horse Power | | | |
| | | | $ | $ | | ' | '' | '' | | | | | |
| 1907 | Scihan, Germany | Fruhling Dredge Co | | 350 | Wood | 18 | 6 0 | 2 6 | Yale, 4 Cycle | 5 | Gasoline | P.W.D. No. 301 | |
| 1912 | North Vancouver, B.C | A. Linton | 448 | 400 | Wood | 18 | 5 6 | 2 4 | Ferro, 2 Cycle | 5½ | Gasoline | P.W.D. No. 303 | |
| 1911 | Vancouver, B.C. | Vancouver Shipyards, Ltd | 450 | 250 | Wood | 18 | 6 0 | 2 6 | Grey, 2 Cycle | 8 | Gasoline | P.W.D. No. 307 | |
| 1914 | Vancouver, B.C | Y. M. Dafoe | 335 | 335 | Wood | 18 | 5 6 | 2 4 | Caillie Perfection, 2 Cycle | 8 | Gasoline | Divers, B.C | 1 |
| | | | | 400 | Wood | 18 | 5 6 | 2 6 | Canadian Fairbanks Morse | 8 | Gasoline | Drilling Plant, B.C. | 2 Cyl., 2 Cycle |

DEPARTMENTAL HOPPER SCOWS, 1915.

| Departmental Number. | When built. | Where Built. | Builder. | Cost. each. | Present estimated value each. | Material of construction. | Length. | Breadth. | Depth. | Draft light. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ | $ | | ' " | ' " | " | ' " |
| No. 101 and 102 | 1907 | Collingwood, Ont. | Collingwood Shipbuilding Co. | 28,000 | 22,000 | Steel | 136 4 | 31 3 | 11 0 | 5 0 |
| No. 103 and 104 | 1907 | Toronto, Ont. | Polson Iron Works | 28,000 | 22,000 | Steel | 145 9 | 31 3 | 11 0 | 5 0 |
| No. 105 and 106 | 1906 | New Glasgow, N.S. | I. Matheson & Co. | 11,000 | 7,000 | Steel | 106 0 | 23 0 | 8 7 | 3 2 |
| No. 107 | | Pictou, N.S. | Pictou Foundry and Machine Co. | 10,000 | 7,000 | Steel | 107 0 | 23 0 | 10 0 | 3 0 |
| No 108 and 109 | 1907 | St. John, N.B. | Jas. Fleming | 11,000 | 3,500 | Iron and steel | 107 0 | 23 0 | 7 6 | 3 2 |
| No. 110 and 111 | | | | | 1,500 | Wood | 71 6 | 19 8 | 7 2 | 3 5 |
| No. 112, 113 and 114 | | | | | 300 | Wood | 55 0 | 19 0 | 6 0 | 2 6 |
| No. 151 | 1897 | Point Levis, P.Q. | Carrier Laine Co. | 11,000 | 7,000 | Steel | 106 6 | 22 6 | 8 0 | 3 0 |
| No. 152 | | New Glasgow, N.S. | I. Matheson & Co. | 11,000 | 7,000 | Steel | 106 6 | 22 6 | 8 0 | 3 0 |
| No. 153 and 154 | 1906 | Yarmouth, N.S. | The New Burrill Johnson Iron Co. | 11,000 | 9,000 | Steel | 110 0 | 22 10 | 8 0 | 3 0 |
| No. 155 | 1906 | St. John, N.B. | Jas. Fleming & Son | | | Steel | 107 0 | 23 0 | 10 0 | 3 0 |
| No. 156 and 157 | 1913 | New Glasgow, N.S. | Brown Machine Co. | 14,000 | 14,000 | Steel | 75 0 | 26 6 | 8 3 | 2 6 |
| No. 2 and 57 | 1907 | St. Jean Iberville | P.W.D. | | 4,000 | Wood | 68 0 | 21 0 | 7 0 | 2 6 |
| No. 10 | 1904 | Ottawa | P.W.D. | | | Wood | 71 0 | 19 0 | 7 0 | 2 6 |
| No. 11 | 1904 | Ottawa | P.W.D. | | | Wood | 73 0 | 19 0 | 7 0 | 2 6 |
| No. 12 and 13 | 1910 | Aylmer | James Bailie | 2,000 | 1,500 | Wood | 54 0 | 13 0 | 5 6 | 18 |
| No. 14 | 1908 | Collingwood | Collingwood Shipbuilding Co. | 24,000 | 21,000 | Steel | 144 0 | 31 0 | 11 6 | 5 0 |
| No. 15 | 1907 | Collingwood | Collingwood Shipbuilding Co. | 24,000 | 21,000 | Steel | 144 0 | 31 0 | 11 6 | 5 0 |
| No. 18 and 19 | 1914 | Roberval | Jonhny Poitras | 6,624 | 3,500 | Wood | 60 0 | 16 0 | 6 0 | 20 |
| No. 20 and 21 | 1905 | Sturgeon Falls | Tessier & Smith | 3,000 | 5,000 | Wood | 70 0 | 19 4 | 7 0 | 2 0 |
| No. 22 and 23 | | Sorel, P.Q. | P.W.D. | | 1,500 | Wood | 62 0 | 17 4 | 7 0 | 3 0 |
| No. 24 and 25 | 1906 | Buckingham, Que. | W. H. Kelly | 4,000 | 3,000 | Wood | 52 10 | 11 2 | 5 5 | 19 |
| No. 26 and 27 | | Ottawa, Ont. | P.W.D. | | 3,000 | Wood | 61 0 | 16 9 | 6 0 | 2 0 |
| No. 28 and 29 | | | | | 4,000 | Wood | 76 0 | 22 6 | 7 0 | 2 4 |
| No. 32 and 33 | | | | | 4,000 | Wood | 72 0 | 20 0 | 7 4 | 2 8 |
| No. 35 | 1905 | Ottawa | P.W.D. | | 425 | Wood | 90 0 | 25 0 | 11 0 | 3 0 |
| No. 38 and 39 | 1909 | Toronto | Toronto Ship Yard Co. | 14,000 | 14,000 | Steel | 102 0 | 28 3 | 9 0 | 2 0 |
| No. 40 and 41 | 1903 | Temiskaming Station | Charles Morin | 2,000 | 3,500 | Wood | 67 0 | 25 6 | 5 0 | 18 |
| No. 42 and 43 | | | | | 3,500 | Wood | 54 5 | 14 0 | 5 5 | 2 0 |
| No. 44 and 45 | 1899 | Ottawa | P.W.D. | | 5,000 | Wood | 72 0 | 20 3 | 7 2 | 3 0 |
| No. 48 | 1912 | Grandes Piles, Q. | P.W.D. | | 4,000 | Wood | 55 0 | 20 0 | 5 0 | 0 8 |
| No. 49 | 1913 | Pointe Madeleine | P.W.D. | 3,000 | 4,000 | Wood | | | | |
| No. 50 | | | | | 4,500 | Wood | 132 0 | 28 6 | 9 0 | 3 0 |
| No. 53 and 54 | 1913 | Levis | Geo. T. Davie & Sons | 14,850 | 14,850 | Wood | 89 0 | 25 0 | 10 0 | 3 0 |
| No. 16 | | Sorel | P.W.D. | | 9,000 | Wood | 90 0 | 25 0 | 10 0 | 3 0 |
| | | Ottawa | | | | Wood | 72 0 | 21 0 | 9 0 | 2 6 |
| No. 17 | 1913 | Sturgeon Falls | Chas. Williams | 4,700 | 4,500 | Wood | 70 0 | 19 4 | 7 0 | 2 0 |
| No. 115 and 116 | 1906 | St. John, N.B. | J. Fleming, Phonix Foundry | 17,000 | 14,000 | Steel | 108 0 | 23 10 | 8 3 | 2 6 |
| No. 201 and 202 | 1911 | Selkirk, Man. | P.W.D. | 4,500 | 3,150 | Wood | 80 0 | 20 0 | 8 0 | 3 0 |
| No. 203 and 204 | 1909 | Selkirk, Man. | P.W.D. | 2,250 | 1,500 | Wood | 60 0 | 16 0 | 6 0 | 2 6 |
| No. 205 and 206 | 1912 | Selkirk, Man. | P.W.D. | 3,000 | 2,430 | Wood | 60 0 | 16 0 | 6 0 | 2 6 |
| No. 209 and 210 | 1910 | Winnipegosis, Man. | P.W.D. | 2,800 | 1,700 | Wood | 60 0 | 16 0 | 6 0 | 2 6 |
| | 1910 | Westbourne, Man. | P.W.D. | 2,700 | | Wood | 60 0 | 16 0 | 6 0 | 2 6 |
| | 1906 | Westbourne, Man. | P.W.D. | 3,000 | | Wood | 60 0 | 16 0 | 6 0 | 2 6 |
| No. 271 | 1911 | Nelson, B.C. | Thos. Cunningham | | 4,000 | Wood | 74 3 | 24 0 | 8 6 | 18 |

| | | |

DEPARTMENTAL HOPPER SCOWS, 1915—*Concluded.*

| Departmental Number. | Draft loaded. | Number of Hoppers. | Capacity each Hopper | Total capacity. | Hoisting arrangement for Hopper Doors. | Used in connection with. | Province where used. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| | | | Cu' Yds. | Cu. Yds. | | | | |
| No. 49 | | | 4 | 43 | | P. W. D. No. 122 | Ont. and Que. | |
| No. 101 and 102 | 11 0 | 8 | 70 | 560 | Side shafts, hand lever purchase | P. W. D. No. 1 | Maritime Provinces | |
| No. 103 and 104 | 11 0 | 8 | 70 | 560 | Side shafts, hand lever purchase | P. W. D. No. 1 | Maritime Provinces | |
| No. 105 and 106 | 7 8 | 2 | 95 | 190 | Winch and chain, lever hoist | P. W. D. No. 2 | Maritime Provinces | |
| No. 107 | 7 6 | 2 | 96½ | 193 | Lever | P. W. D. No. 3 | Maritime Provinces | |
| No. 108 and 109 | 7 2 | 2 | 100 | 200 | Ratchet windlass on each end of scow | P. W. D. No. 9 | Maritime Provinces | |
| No. 110 and 111 | 6 3 | 2 | 50 | 100 | Tubular barrel and chain, bar and ratchet | P. W. D. No 10 | Maritime Provinces | |
| No. 112, 113 and 114 | 6 6 | 1 | 50 | 50 | Barrel (wooden) and chains | P. W. D. No. 11 | Maritime Provinces | |
| No. 151 | 7 0 | 2 | 100 | 200 | Fore and aft winch hoist | P. W. D. No. 6 | Maritime Provinces | |
| No. 152 | 7 0 | 2 | 100 | 200 | Fore and aft winch hoist | P. W. D. No. 6 | Maritime Provinces | |
| No. 153 and 154 | 6 0 | 2 | 107½ | 215 | Crab winch, with ratchet | P. W. D. No. 7 | Maritime Provinces | [1]No. 154 was built in 1907. |
| No. 155 | 7 6 | 2 | 100 | 200 | Chain | P. W. D. No. 3 | Maritime Provinces | |
| No. 156 and 157 | 7 0 | 3 | 50 | 150 | Hand hoisting gear | P. W. D. No. 13 | Maritime Provinces | |
| No. 2 and 57 | 5 6 | 2 | 26 | 52 | Chain on roller | P. W. D. No. 106 | Ont. and Que. | |
| No. 10 | 6 0 | 2 | 48½ | 97 | Chain and roller | P. W. D. No. 123 | Ont. and Que. | |
| Ng. 11 | 6 0 | 2 | 50 | 100 | Chain and roller | P. W. D. No. 123 | Ont. and Que. | |
| N. 12 and 13 | 4 6 | 2 | 14 | 28 | Chain and Roller | P. W. D. No. 108 | Ont. and Que. | |
| No. 14 | 11 0 | 8 | 75·7 | 607 | Steam winding engine | P. W. D. No. 109 | Ont. and Que. | |
| No. 15 | 11 0 | 8 | 63·3 | 507 | Steam winding engine | P. W. D. No. 109 | Ont. and Que. | |
| No. 18 and 19 | 4 6 | 2 | 32½ | 65 | Chain and wooden roller | P. W. D. No. 111 | Ont. and Que. | |
| No. 20 and 21 | 7 0 | 2 | 50 | 100 | Chain and roller | P. W. D. No. 112 | Ont. and Que. | |
| No. 22 and 23 | 6 0 | 2 | 39 | 78 | By hand | P. W. D. No. 113 | Ont. and Que. | |
| No. 24 and 25 | 4 3 | 2 | 15 | 30 | Iron rollers worked by hand | P. W. D. No 102 | Ont. and Que. | |
| No. 26 and 27 | 5 6 | 2 | 33 | 66 | Wooden roller and chain | P. W. D. No. 103 | Ont. and Que. | |
| No. 28 and 29 | 6 0 | 3 | 40 | 120 | Chain and cable on rollers | P. W. D. No. 105 | Ont. and Que. | |
| No. 32 and 33 | 6 7 | 2 | 52½ | 105 | Chain and roller | P. W. D. No. 114 | Ont. and Que. | |
| No. 35 | 9 6 | 6 | 41½ | 249 | Chain and roller | P. W. D. No. 115 | Ont. and Que. | |
| No. 38 and 39 | 8 6 | 5 | 60 | 300 | Chain and roller | P. W. D. No. 117 | Ont. and Que. | |
| No. 40 and 41 | 4 0 | 2 | 18½ | 37 | Steel roller | P. W. D. No. 118 | Ont. and Que. | |
| No. 42 and 43 | 5 0 | 4 | 8½ | 35 | Eccentric dumper | P. W. D. No. 119 | Ont. and Que. | |
| No. 44 and 45 | 6 6 | 2 | 50 | 100 | Hand | P. W. D. No. 120 | Ont. and Que. | |
| No. 48 | 4 0 | 4 | 11 | 44 | Ratchet | P. W. D. No. 122 | Ont. and Que. | |
| No. 50 | 8 6 | 6 | 73·3 | 440 | Chain, hand winding | P. W. D. No. 117 | Ont. and Que. | |
| No. 53 and 54 | 9 0 | 6 | 43·83 | 263 | Chain on roller | P. W. D. No. 110 | Ont. and Que. | |
| No. 16 | 9 0 | 6 | 41·66 | 250 | wire on roller | P. W. D. No. 116 | Ont. and Que. | |
| | 8 6 | 2 | 51 | 102 | Wire on roller | P. W. D. No. 116 | Ont. and Que. | Since sold. |
| No. 36 and 17 | 7 0 | 2 | 50 | 100 | Wire on roller | P. W. D. No. 112 | Ont. and Que. | |
| No. 115 and 116 | 7 0 | 2 | 100 | 200 | Hand winding | P. W. D. No. 4 | Ont. and Que. | |
| No. 201 and 202 | 7 0 | 2 | 50 | 100 | Rollers | P. W. D. No. 205 | Man., Sask., Alta. | |
| No. 203 and 204 | 5 0 | 2 | 30 | 60 | Rollers | P. W. D. No. 204 | Man., Sask., Alta. | |
| No. 205 and 206 | 5 0 | 2 | 30 | 60 | Rollers | P. W. D. No. 202 | Man., Sask., Alta. | |
| No. 209 and 210 | 5 0 | 2 | 30 | 60 | Rollers | P. W. D. No. 210 | Man., Sask., Alta. | |
| | 5 0 | 2 | 30 | 60 | Rollers | | Man., Sask., Alta. | |
| | 5 0 | 2 | 30 | 60 | Rollers | | Man., Sask., Alta. | |
| No. 271 | 8 0 | 3 | 45 | 135 | Ratchet and cable | P. W. D. No. 302 | B.C. | |
| No. 303 and 304 | 7 0 | 4 | 45 | 180 | Hand, pawl and ratchet | P. W. D. No. 307 | B.C. | |
| Ng. 305 and 306 | 9 8 | 5 | 60 | 300 | Chain, wire, shaft, hand hoist | P. W. D. No. 301 | B.C. | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. 307 | | | | | | Cog hand gear for air or steam | P. W. D. No. 313 | B.C. |
| No. 308, 309 and 310 | 10 | 0 | 5 | 52 | 200 | Worm gear operated by air | P. W. D. No. 306 | B.C. |
| No. 46 and 47 | | | 5 | 52 | 200 | | P. W. D. No. 121 | Ont. and Que. |
| No. 207 and 208 | 5 | 0 | 2 | 30 | 60 | Side dump | P. W. D. No. 208 | Man. |
| No. 158 and 159 | 6 | 0 | 2 | 30 | 60 | Rollers | P. W. D. No. 11 & 10 | Maritime Provinces |
| No. 117 and 118 | 10 | 6 | 2 | 412 | 95 | Side shafts | P. W. D. No. 1 | Maritime Provinces |
| No. 51, 52, 55 and 56 | 8 | 0 | 8 | 624 | 560 | Side shafts | Spare | Ont. and Que. |
| No. 36 | 8 | 0 | 5 | 60 | 200 | Side shafts | P. W. D. No. 115 | Ont. and Que. |
| No. 1 | 9 | 0 | 6 | 41-66 | 250 | Wire on roller | P. W. D. No. 116 | Ont. and Que. |
| | | | 6 | 41-66 | 250 | Wire on roller | | |

## DEPARTMENTAL FLAT DECK SCOWS, 1915.

| Number. | When built. | Where built. | Builder. | Cost. | Present estimated value. | Material of construction. | Thickness of sides. | Thickness of bottom. | Thickness of deck. | Length. | Beam. | Depth. | Draft light. | Draft loaded. | Used in connection with. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $ | $ | | " | " | " | ' " | ' " | ' " | ' " | ' " | | |
| ..... | 1914 | Pictou, N.S. | William Talbot | 450 | 450 | Wood | 3½ | 3½ | 3 | 31 0 | 12 0 | 3 0 | 0 4 | 2 0 | P.W.D. No.5 | For removing ashes, etc. from dredge. |
| No. 40 | | | | | | Wood | 6 | 4 | 3 | 50 0 | 19 0 | 5 0 | 1 3 | 4 0 | P.W.D. No. 119 | |
| No. 42 | 1903 | Temiskaming | Charles Morin | 1,200 | 800 | Wood | 3 | 3 | 3 | 36 0 | 20 4 | 4 6 | 1 6 | 4 6 | P.W.D. No. 118 | |
| ..... | | | | | | Wood | 4 | 4 | 3 | 91 0 | 32 0 | 8 6 | 2 6 | 3 6 | P.W.D. No. 110 | |
| ..... | | | | | 2,000 | Wood | 4 | 4 | 3 | 85 0 | 30 0 | 8 6 | 2 0 | 6 0 | P.W.D. No. 117 | |
| ..... | | Chicoutimi | P. W. D | | | Wood | 5 | 4 | 3 | 89 0 | 35 0 | 12 0 | 2 6 | 9 0 | P.W.D. No. 115 | Coal scow. |
| ..... | 1908 | Roherval | Johnny Poitras | 200 | 200 | Wood | 3 | 3 | 2 | 30 0 | 14 0 | 3 0 | 0 10 | 2 0 | P.W.D. No. 111 | Used for carrying wood or coal. |
| ..... | | Deschenes | | | 300 | Wood | 3 | 3 | 4 | 40 0 | 16 0 | 3 4 | 0 6 | 2 6 | P.W.D. No. 108 | One for fuel and one with cabin for accommodation. |
| ..... | | | | | 1,400 | Wood | 4 | 3 | 3 | 50 6 | 20 6 | 4 9 | 1 6 | 4 0 | P.W.D. No. 103 | |
| ..... | | | | | | Wood | 4 | 3 | 3 | 50 0 | 20 0 | 4 0 | 1 0 | 3 4 | P.W.D. No. 122 | |
| ..... | 1906 | Buckingham | W. H. Kelly | 800 | 640 | Wood | 3 | 3 | 3 | 49 7 | 18 2 | 4 0 | 1 3 | 2 7 | P.W.D. No. 2 | |
| ..... | | | | | 2,000 | Wood | 6 | 4 | 3 | 78 6 | 18 0 | 9 0 | 3 0 | 4 6 | P.W.D. No. 113 | |
| ..... | 1913 | Ottawa | P. W. D | 1,000 | 400 | Wood | 4 | 2 | 3 | 51 0 | 20 0 | 5 0 | 1 3 | 4 0 | P.W.D. No. 112 | Shipped knock down and assembled, Sturgeon Falls. |
| ..... | | | | | | Wood | 3 | 3 | 3 | 75 0 | 18 0 | 5 0 | 1 3 | 4 0 | P.W.D. No. 106 | Coal barge |
| ..... | 1908 | Penticton, B.C. | P. W. D | 350 | 250 | Wood | 2 | 3 | 2 | 34 0 | 14 0 | 3 3 | 0 6 | 0 10 | P.W.D. No. 304 | |
| ..... | 1908 | Chase, B.C. | P. W. D | 850 | 765 | Wood | 3 | 3 | 2 | 40 0 | 16 0 | 3 7 | 0 6 | 0 12 | P.W.D. No. 309 | |
| ..... | 1912 | Nakusp, B.C. | S. Mills | | 1,500 | Wood | 2½ | 2½ | 2½ | 60 6 | 18 4 | 4 5 | 1 0 | 2 4 | | Coal tender. |
| ..... | | | | | 500 | Wood | 2½ | 2½ | 2 | 51 0 | 18 0 | 3 0 | 0 6 | 1 2 | | |
| ..... | 1911 | Nelson, B.C. | Thos. Canningham | | 1,200 | Wood | 3½ | 3 | 2 | 60 0 | 18 0 | 4 4½ | 0 9 | 3 0 | P.W.D. No. 302 | Fuel barge and a forge and shop. |
| ..... | | Golden, B.C. | | | 1,000 | Wood | 3 | 3 | 2½ | 50 0 | 18 0 | 3 6 | 0 10 | 2 2 | Snag boat Muskrat. | |
| ..... | 1913 | Nelson, B.C. | George Hale | 1,653 | 1,600 | Wood | 6 & 4 | 3 | 1 | 50 0 | 18 0 | 4 0 | 0 9 | 3 4 | Pile driver No.1 | Barge carrying capacity 50 tons, 12" plank and 1" sheeting. |
| ..... | | Nakusp, B.C. | | | 500 | Wood | 2½ | 2½ | 2 | 40 0 | 20 0 | 4 6 | 1 0 | 1 6 | Pile driver | As boarding camp. |
| ..... | | Golden, B.C. | | | 850 | Wood | 3 | 3 | 3 | 50 0 | 18 0 | 3 6 | 1 0 | 2 6 | | |
| ..... | | | | | 800 | Wood and iron. | 6 | 4 | 3 | 86 0 | 24 0 | 6 0 | 1 6 | 4 6 | P.W.D. No. 307 | |
| ..... | 1913 | New Westminster, B.C. | Westminster Marine Railways | 3,236 | 3,000 | Wood | 4 | 2½ | 2 | (32 6) (26 6) | 12 0 | (2 8) (2 4) | 0 10 | 1 4 | P.W.D. No. 305 | 3 long and 8 short pontoons. |
| ..... | 1911 | Vancouver, B.C. | Vancouver Shipyards | 3,702 | 3,500 | Wood | 4 | 2½ | 2 | (32 6) (26 6) | 12 0 | (2 8) (2 4) | 0 10 | 1 4 | P.W.D. No. 305 | 7 long and 8 short pontoons. |
| ..... | 1910 | New Westminster, B.C. | P. W. D | | 2,000 | Wood | 4 | 2½ | 2 | 32 6 | 12 0 | 2 8 | 0 10 | 1 4 | P.W.D. No. 305 | 14 pontoons. |
| ..... | 1901 | New Westminster, B.C. | Royal City Planing Mills | | | Wood | 4 | 2¼ | 1½ | (34 0) (24 0) | 12 0 | 2 3 | 0 10 | 1 4 | PW.D..No. 305 | 1 long and 11 short pontoons. |
| ..... | 1897 | New Westminster, B.C. | P. W. D | | | Wood | 6 | 4 | 3 | 76 0 | 24 2 | 5 0 | 1 4 | 4 0 | P.W.D. No. 305 | Pipe scow. |
| ..... | 1904 | New Westminster, B.C. | P. W. D | | 1,800 | Wood | 5 | 3 | 2½ | 60 0 | 18 0 | 4 0 | 1 8 | 2 6 | P.W.D. No. 305 | Power scow, blacksmith and carpenter shop. |
| ..... | 1910 | New Westminster, B.C. | E. Mercer | 1,000 | 700 | Wood | 5½ | 3 | 2½ | 45 0 | 16 0 | 5 0 | 1 0 | 3 0 | P.W.D. No. 305 | Water scow. |
| ..... | | New Westminster, B.C. | P. W. D | | 4,000 | Wood | 6 | 4 | 3 | 86 6 | 27 0 | 7 0 | 1 6 | 5 0 | P.W.D. No. 305 | Oil fuel scow. |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ..... | 1913 | North Vancouver ..... | Wallace Shipyards Ltd., and Standard Iron Works. | 5,600 | 5,100 | Wood..... | 6 | 4 | 3 | 66 9 | 21 0 | 6 0 | 0 10 | 5 0 | P.W.D. No. 306 | Oil fuel scow. |
| Spoonbill.. | 1911 | Pentieton, B.C..... | P. W. D ..... | 1,250 | 1,250 | Wood..... | 3 | 3 | 2 | 40 0 | 16 0 | 3 10 | 0 10 | 1 2 | P.W.D. No. 304 | Bunk scow. |
| Mallard... | 1914 | Chase, B.C..... | P. W. D..... | 1,762 | 1,762 | Wood..... | 3 | 3 | 2 | 50 0 | 18 0 | 4 0 | 0 10 | 1 2 | Kuspidor . . | Bunk scow. |
| ..... | 1913 | North Vancouver ..... | Wallace Shipyard, Ltd..... | 2,800 | 2,650 | Wood..... | 5 | 3 | $2\frac{1}{4}$ | 60 0 | 22 0 | 3 0 | . . . . | . . . . | P.W.D. No. 306 | Bunk scow, number of bunks 22. |
| ..... | 1912 | North Vancouver ..... | Wallace Shipyard, Ltd..... | 2,500 | 2,200 | Wood..... | 5 | 3 | $2\frac{1}{4}$ | 60 0 | 20 0 | 3 0 | .... | .... | P.W.D. No. 301 & 307. | Bunk scow, number of bunk 24. |
| ..... | 1913 | Victoria..... ..... | Victoria Machinery Depot..... | 177 | 150 | Wood. ... | .... | .... | .... | 18 0 | 10 0 | 2 0 | ..... | ..... | ..... ..... | Diver's outfit cost $850. |

DEPARTMENTAL SWEEPING SCOWS.

| No | When built. | Where built. | Builder. | Cost. | Present estimated value. | Material of construction. | Hull. | | | Maximum sweeping depth. | Machinery operated by. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Length. | Beam. | Depth. | | |
| | | | | | | | ′ ″ | ′ ″ | ′ ″ | ′ ″ | |
| 2 | 1914 | Ottawa ... . . . . | P. W. D .... ..... | ..... | ..... | Wood .... . | 35 0 | 18 0 | 3 6 | 20 0 | By hand. |
| 1 | 1914 | St. John, N.B . . . . . | P. W. D ..... | ..... | ..... | Wood .... . | 30 0 | 13 0 | 3 6 | 60 0 | By hand. |

## DEPARTMENTAL INSPECTION BOATS NOT UNDER THE CONTROL OF THE DREDGING BRANCH.

| Name. | Official Registry No. | Registered Tonnage. | When built. | Where built. | Builder. | Cost equipped. | Present Estimated Value. | Hull. | | | | | Average Speed. | Engines | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Material. | Lenght O.A. | Beam Amidship. | Depth. | Working Draft. | | Number. | Size. | Type. | Make. | I.H.P. |
| | | | | | | $ | | | | | | | | | | | | |
| Eugene | | | 1915 | Brockville, Ont | Harold F. Hodson | 3,790 | | Wood | 35 0 | | | | | | | | | |
| D.P.W. | | | 1913 | Dartmouth, N.S | E. F. Williams | 5,750 | | Wood | 46 0 | | 4½ | 5 0 | | | | Gasoline | | |
| Margaret | | | 1914 | | The Midland Coal Dock Co. / The Georgian Bay Ship-bldg. Co. | | | Steel frame / Wooden planks | | | | | | | | | | |
| Eleanor | | | 1911 | Doughstown, N.B | Wm. Carson | 15,650 | | Deck B C. fir | 83 0 | | 11 0 | 8 2 | 10 miles p.h. | | | Marine | | 160 h.p. |
| Kegashka | | | 1914 | | Geo. Henderson | 3,617 | | Wood | 48 0 | | 9 6 | 4 6 | | | | Gasoline | | 55-60 h.p. |
| Marie Louise | | | 1911 | | Dept. of Public Works | 9,000 | | Wood | 71 0 | | 8 0 | 7 0 | | | | Gasoline | | |
| Jeannette | | | 1912 | | Simard & Paradis | 2,500 | | Wood | 37 0 | | 8 0 | 4 0 | | | | Gasoline | | |
| Montmorency | | | | Sorel, Que | Chantier Maritime de Saint-Laurent | 3,500 | | Wood | 29 0 | | 5 0 | 5 0 | | | | Gasoline | | |
| Florence | | | | Brockville | Mr. Beauchemin / St. Lawrence Engine Co. Ltd | 20,000 | | Wood | 66 0 | | 5 8 | 6 0 | | | | | | 21-3 h.p. |
| Lillian | | | 1905 | (Has since been destroyed) | | 1,300 | | Wood | 29 6 | | | 2 6 | | | | Gasoline | | |
| Daphne | | | 1912 | | Capt. Geo. Bussey—day's labour | 500 | | Wood | 26 8 | | 32 0 | 2 0 | | | | 2 cylinder | | 10 h.p. |
| Cingalee | | | 1905 | | Jos. Hobbs | 2,000 | | Wood | 41 0 | | 6 6 | 2 6 | | | | Gasoline | | |
| Nokomis | | | | | Capt. Geo. Bussey—day's labour | 6,500 | | Wood | 78 0 | | 5 0 | 7 0 | | 8 x16 x12 | | Doty eng. | | 10-6 h.p. |
| Meteor | | | 1913 | Victoria, B.C | Point Ellice Boat Co. | 4,500 | | Wood | 36 0 | | 5 0 | 4 0 | | | | Gasoline | | |
| Eloyne | | | 1912 | Nelson, B.C | Thos. Cunningham | 600 | | Wood | 25 0 | | 5 6 | 2 49 | | | | Gasoline | | |
| Leila | | | 1914 | Prince Rupert | Dept. of Public Works | 1,682 | | Wood | 27 8 | | 3 0 | 2 6 | | | | Gasoline | | 60 h.p. |
| Thelma | | | 1910 | Penetanguishene, Ont | N. E. Gidley | 3,532 | | Wood | 41 0 | | 5 4 | 3 7 | | | | Gasoline | | 25 h.p. |
| Senawa Nabee | | | 1911 | | Fred S. Heans | 2,100 | | Wood | 35 0 | | 3 10 | 2 8 | | | | Gasoline | | |
| Oswegatchie | | | | | | 8,000 | | Wood | 52 0 | | 6 0 | 4 0 | | | | Gasoline | | |
| | | | | | | 28,000 | | Wood | 71 0 | | 7½ | 6 0 | | | | Coal | | |

## DRY DOCKS.

The Dominion Government owns three dry docks and operates two, viz., the Lorne dry dock, at Lévis, province of Quebec; the Kingston dry dock, at Kingston, province of Ontario, and the Esquimalt dry dock, at Esquimalt, near the city of Victoria, in British Columbia.

### LÉVIS DRY DOCK.

Lévis is situated on the south shore of the River St. Lawrence, opposite the city of Quebec.

During the past fiscal year, the dock was kept in good condition by the regular staff; twenty-two vessels were docked, seven of which wintered in the dock.

The revenue for the fiscal year was $21,320.20, and the expenditure for maintenance and repair was $18,268.74.

### NEW LAUZON DRY DOCK.

On the 17th of July, 1913, a contract was entered with the contractors M. P. & J. T. Davis, for the construction of a dry dock.

The work consisted in the construction of a complete dock 1,150 feet long with an entrance 120 feet wide.

The construction of a cofferdam across the entrance.

The construction of two entrance piers 600 feet long and 75 feet wide in 30 feet of water at low tide.

The dredging of a channel, 400 feet wide and 30 feet deep at low water, to connect the dock with the main channel.

The construction of a landing wharf 300 feet long and 32 feet wide in 25 feet of water at low tide.

During the year 1914-15, the excavation for the dry dock was carried down to an average depth of 11 feet on the full width of the dock for a length of 550 feet, which amounted to 18,638 cubic yards of earth excavation, 13,498 yards of rock excavation above coping and 17,500 yards of rock excavation below coping.

The work started May 18, 1914, and stopped December 15, 1914.

The concrete retaining walls, one on each side of the dock, were built on their total length 850 feet each, to an average height of 17 feet, together with part of the concrete foundations for the power house. The total being 8,160 cubic yards of concrete.

That work was started July 20, and stopped in November, 1914.

The cribwork for the coffer dam to close the entrance was built and set in place, for which a sum of $50,000 on the lump sum was granted.

For the landing wharf, one of the cribs was completed to full height of 32 feet; and another of the same size to a height of 18 feet; they were not set in place, on account of bad weather during the fall.

The earth and rock excavation for the water service pipe was completed and a 4-inch cast-iron pipe laid for a length of 770 feet.

The dredge excavated, during the year, 423,262 cubic yards from the site of the landing wharf and in the entrance channel; work started on June 29, and stopped on December 9, 1914.

A large quantity of timber for cribwork was delivered on the site during the year.

The expenditure during the fiscal year was:—

| | |
|---|---|
| Cofferdam | $ 50,000 00 |
| Excavation | 33,976 10 |
| Retaining wall | 53,040 00 |
| Water service pipe | 770 00 |
| Dredging | 148,141 70 |
| Materials delivered | 24,954 40 |
| | $310,882 20 |

ESQUIMALT DRY DOCK.

During the past year, twenty-nine ships have been docked for cleaning, painting and repairs. Total revenue collected from this source and from the Militia Department for water and light supplied while the dockyard was in use as a camp is $13,635.75.

The staff have been variously employed in docking and undocking the above ships and keeping the buildings and machinery in repair and cleaning the grounds, the latter especially after the departure of the troops.

Two welt wheels in connection with the hauling gear of the caisson were removed and new castings installed. The keel blocks have been raised permanently to 3 feet 6⅞ inches and securely fastened.

Early in August, some 500 troops were quartered in the dockyard, remaining until the middle of November, the forces being now reduced to a guard of about twenty men. The dock was closed to merchant shipping by the naval authorities from the beginning of October to the middle of December. During the remainder of December, the caisson was on the slipway undergoing repairs. Under these conditions no revenue was obtained but an increase in cost of operation was entailed on account of electric light and water being used freely by the naval and militia forces quartered here, a portion only of the cost of the above being refunded. The caisson was hauled out to the marine railway and the meeting face on each side was renewed with teak wood, the floating and sinking valves were overhauled and repaired where necessary so that the leakage when the caisson is in position is now very slight. All of the woodwork on the top of the caisson was renewed. The work of carrying out the above repairs was considerably delayed awaiting the sanction of the naval authorities. A flaw developed in the main steampipe connected to the main pumping engines and was repaired by putting in 13 feet of 6-inch pipe.

The plant is now in a good state of repair, but as the same has been in use about thirty years, increased cost in renewals must be anticipated, and for this reason an extra $2,000 has been included in the estimates for 1915-16.

The efficiency of the dock would be greatly increased by the addition of a travelling crane as included in our estimates, also by the provision of an electric pump to facilitate moving the caisson from the inner to the outer berth as it is at present necessary to await the fall of the tide to allow the caisson to be sufficiently lightened for flotation. This delay has recently been of considerable consequence when the dock had been in use by H.M.S. *Newcastle*. The estimated cost of the above would be about $1,000. Should it not be possible to grant an appropriation for the cost of a travelling crane it is hoped that it will be possible to make an appropriation for the lesser cost required for the installation of an electric pump for the caisson.

The amount authorized was $20,300, including $2,800 for caisson repairs and renewals, and the amount expended was $20,134.65.

KINGSTON GRAVING DOCK.

On the 1st of May, 1910, the Kingston Shipbuilding Company took possession of the dock under lease, the rental of which, $10,000 per annum, was payable at the end of each year.

## QUEBEC.

### LOCKS AND DAMS.

RIVIÈRE DU LIÈVRE LOCK AND DAM.

During the past year, the lock at Poupore has been kept in operation in charge of O. Laframboise, lockmaster, with one assistant during navigation season. During April, May and June, booms were repaired, placed and operated. Repairs to lower gate valves were made in August. The roadway across the property was graded and gravelled in October and November. The road outlet to the highway was purchased at a cost of $50 (O. C. July 3, 1914). New B. C. fir 2-ply booms were bought to replace the old gap booms. New stop-logs were bought to replace old ones.

Maintenance of these works during the year has cost: Wages, $1,688.31; materials for repairs, $2,190.57; telephone, $15; forming a total of $3,893.88.

MONTREAL RIVER.

Latchford, District of Nipissing, is a small town on the T. & N. O. Ry., located on the Montreal river.

The Latchford regulating dam, 394.5 feet long, is of concrete, and provides eleven stop-logged sluiceways, 20 feet wide, separated by piers 4 feet 9 inches wide and 20 feet high. Floors of sluiceways are 3 to 4 feet thick, on bedrock, some 20 feet below R.W.S., and the abutments are riprapped up and downstream. On the northwest side there is a core wall 31 feet long from bedrock to the R.W.S.; on the southeast side the core wall is 12 feet long, in high ground, and is built 6 to 7 feet below R.W.S. Four of the piers have been extended 8 feet downstream for a height of 13 feet, so as to facilitate driving of logs. Upstream, six cribs, 16 by 16 feet, and one 12 by 12 feet, have been built to hold 4-ply B.C. fir, stiff booms, some 1,000 lineal feet. The dam is regulated by steam and hand-operated log-lifter from the steel I-beam and plank bridge; provision is made for completing the bridge with reinforced concrete when required.

The dam has been in operation during the past year and certain necessary repairs and improvements were carried out.

A misplaced anchor crib was dismantled and rock ballast piled for use later. Riprapping was done around abutments on both sides. Cofferdams, inflow and outflow of sluiceways and remnants of training dykes blasted out and sluiceways cleaned and repaired. Temporary booms were placed in connection with running some 450,000 logs. The Crown property around dam was cleaned and approaches of dam improved. Necessary painting of plant, etc., was done. The wings of southeast abutment were raised one foot and 12-foot core wall extension built to limit possible seepage in future; 425 superficial feet of southeast abutment was surfaced with re-tempered concrete. Three new anchor cribs have been built for booms.

During the winter, 1,000 lineal feet 4-ply 12 by 14-inch B.C. fir booms were constructed and will be placed to facilitate handling of logs. In this connection, J. R. Booth has sunk several anchors above the dam for snubbing sacks of logs during his drive.

In August, rock blasting was done in Pork rapids, eight miles above Latchford, to facilitate navigation by small boats. Expenditure, $84.20.

A derrick scow, to be used for the excavation of rock at Pork rapids,, was constructed at Latchford, January 6 to March 20. It is built of 5-inch B.C. fir on the sides, and 3-inch and 4-inch B.C. fir on bottom, ends and deck, and is 16 by 40 feet long on the bottom and 42 feet long on the deck, with a moulded depth of 4¼ feet. The scow is provided with a pair of 14-inch square by 25-foot anchors, equipped with lifting and locking devices, a 14-inch square by 14-foot mast and 12-inch square by 30-foot boom. The intention is to operate a one cubic yard orange peel bucket by means of 7 by 12-inch three-drum and swinger steam hoist. Everything is completed except erection of hoist house and placing lifting and locking devices, and materials to finish the plant are on the work, except a few sundry fittings.

Expenditure to March 31, $13,219.36.

### YAMASKA LOCK AND DAM.

The lock and dam built under contract about 1882 are situated two miles below the village of St. Michel d'Yamaska, where the Quebec, Montreal and Southern railway crosses the Yamaska river and where the Government built a wharf in 1909.

The Yamaska river rises in the County of Brome and after a course of ninety miles falls into the St. Lawrence at the head of Lake St. Peter. By the construction of these works and dredging through the shoals below and above the lock, the river was rendered navigable for vessels having a maximum draught of 4 feet to Belpoint or Rapides de la Grosses Roche, a distance of twenty miles from its mouth.

The dam consists of a stone-filled crib with plank sheathing on the upper side 502 feet long with a stone-filled, close-faced crib abutment at each end.

At the last session of Parliament, an appropriation of $3,900 was voted for the maintenance of the lock and dam. On May 6, 1914, authority was received to expend this amount.

During the fiscal year 1914-15, the sum of $1,500 was spent in salaries for the lockmaster and his assistant, and $271.67 was spent in opening the lock in spring, closing it in fall, and storing the materials of the lock for the winter.

## ALBERTA.

### PIGEON LAKE DAM.

Pigeon Lake dam was constructed to control the flow of water from lake during the flooding season and to prevent flooding of haylands during hay making. Some twenty-six square miles of hay lands are available through the construction of this work.

A temporary dam was placed on shore of lake at outlet and maintained in position during the construction of the permanent dam.

The permanent dam is constructed with 12-inch diameter tamarack piling, capped and braced, and decked with 4-inch tamarack planking. A self-loading face with protection apron and two sluices giving an opening of 16 feet for overflow from lake, so arranged that stop-logs can be used for control of flow. A fishway is provided between the sluices. Wing protection was carried out on both ends of dam for a considerable distance on shore of lake. Several heavy timber jams were cleared from creek and other obstructions of weeds removed.

This work has materially increased the hay production of this district and will be of great service to the settlers.

The work was done by day labour and carried out during the months of July, August and September, 1914.

## SLIDES AND BOOMS.

The Dominion Government owns and operates slides and boom works, built to facilitate the passage of square timber, round logs, flatted and dimension timber, etc., on the River Ottawa and tributaries; on the St. Maurice river; the Saguenay river; and at Fenelon Falls and Burleigh Falls on the Trent river.

In the subjoined reports the superintending engineers of the river works, Messrs. J. C. Scott, F. X. T. Berlinguet and P. E. Amiot, give particulars relative to the construction, improvements, and repairs carried out under their supervision on Government slides, booms, piers, dams, streams, buildings, etc., during the fiscal year; the expenditure incurred for staff, maintenance, improvements, etc.; the quantities of the various descriptions of timber that pass through their works, and other information of general interest and utility to lumbermen and the public at large.

(By R. F. H. Bruce, Superintending Engineer.)

Ottawa, April 21, 1915.

E. D. Lafleur, Esq.,
Chief Engineer,
Department of Public Works,
Ottawa.

Sir,—I have the honour to submit, herewith, the following report on the works under my charge, for the fiscal year ended March 31, 1915:—

### OTTAMA RIVER WORKS—ORDINARY REPAIRS—STATIONS ON OTTAWA RIVER.

*North Chaudière Station.*—The bulkhead of the upper slide had to be rebuilt, the stringers are 6 by 10 and 32 feet long, and the posts supporting them are 12 inches square, 4 to 6 feet in length; the board fence across the end of St. James street was replaced, its length being 24 and its height 7½ feet; some small repairs were also made to the slidemaster's cabin.

At the lower slide, a glance pier was put in on the east shore at the outlet, to prevent an eddy at this place. The pier is 60 feet long, 10 feet wide and of an average height of 9 feet, filled with stone. In the fall months, when the water in the Ottawa was very low, an apron made of timber was provided and attached to the outlet piers of slide, to prevent damage to logs and timber by striking on the rocky bed of the river.

*South Chaudière Station.*—The only expense at this station was for certain small repairs to the boats and storehouses, the work having been performed by the slidemaster and his regular assistants.

### TRIBUTARIES OF OTTAWA RIVER.

*Gatineau River.*—The expenditure on this river was principally for timber, hardware and stone for repairs to the booms and piers, as well as to the station house.

At the bridge across the old canal, two timber bents, resting on concrete pedestals sunk below the frost line, were erected to support the roadway stringers.

The boommaster utilized his staff employed during the season of navigation in executing the repairs to the different works.

*Madawaska River.*—Two piers supporting the retaining boom at the *mouth of the Madawaska* were rebuilt from the water level. The height of the piers above the water line is 7½ feet, and the size of each is 12½ feet by 14½ feet. Snubbing posts were placed in each pier and fenders were set at the corners to protect the timbers from being

damaged by passing logs and "ice shoves" in springtime. The sheeting on face of another pier was patched where damaged, and the connecting chains and clevises were renewed and adjusted where defects were found.

At *High Falls station*, one of the piers of the guide boom was reconstructed from low water mark, the pier is 16 feet by 24 feet in extent and 9 feet high over the water; the foundations of the upper bulkhead were repaired where the timbers had been knocked out of place; reefs of rock between the bulkhead piers, which proved obstructions in low water, were blasted; the large boom in basin between the two bulkheads was taken out and laid up on shore to dry; the main guide boom at entrance to slide was strengthened by the addition of new timbers secured by screw bolts, and some of the connecting chains were replaced; the sheeting in sides and bottom of the slide were repaired, four new stop-logs were made for the slide, and hardwood planks, an angle iron and two iron plates were fixed at the stop-log gains.

At *Chain Rapids* station, two piers in connection with the guide boom had to be repaired above the water line, one of these is 16 feet by 24 feet by 21 feet and 8 feet above the water; the flat dam to the south of slide had become much dilapidated, and it was necessary to rebuild it—it is 92 feet long with an average height of 7 feet and an average face of 14½ feet, the latter being of 2-inch pine; the head-piers of slide had also to be rebuilt in the new, the one on south side is 48 feet in length, 19 feet in width at upper end and 12½ feet at lower end; the other, on north side, is 50 feet long and 8 feet wide, the height of both piers being 11 feet; the wing dam to north of slide entrance had to be reconstructed, this is a pier of 64 feet long, 7 feet average height and 15 feet average width; the slide bulkhead platform, 17 feet by 20 feet, was covered with 2-inch pine; a new frame for the hoisting crabs was provided; the step-log checks were lined with maple plank; two angle irons were set on the corners; new stop-logs were also made for the slide.

*Coulonge River.*—The portion above water of one of the boom piers at head of High Falls slide was removed and rebuilt; the size of the pier is 26 feet in front, 16 feet at rear, 27 feet on sides and 12 feet high; the bulkhead of slide was renewed, the bents are 16 feet high, set at 6-foot centres, with the usual caps to support the platform on top, and the sides of the bents are sheeted with 3-inch hardwood plank, forming the walls of the slide; the platform, 18 feet by 20 feet, is covered with 3-inch pine; the frame upon which the hoisting crabs are mounted was replaced, and nine new stop-logs were required for the slide. In the third and fourth sections of slide, the foundations needed attention; the superstructure was jacked to grade and vertical posts were placed to help to sustain the weight, thus relieving the cribwork. In the third section, ten posts 16 feet long, were used, and in the fourth, sixteen posts, 13 feet long, the timber being 10 inches square; fifty posts, twenty-three cross sills, and eighty-seven braces were renewed in the slide, the posts are 10 by 10, the sills 12 by 12, and the braces 3 by 6, all of pine; the planking in the sides and bottom of the slide was patched at different places, the quantity used for this purpose being in excess of 26,000 feet b.m. of oak and maple, while over 9,000 feet b.m. of old plank was taken off and replaced after the defective portions had been cut out; 800 lineal feet of footboards were laid, and thirty bars of iron, ¾ by 4 inches, were placed in sides and bottom of slide where the surfaces were most exposed to wear; the station house was sheeted with new lumber, the foundation sills were laid with new material and a door and window were provided to place this building in a proper state of repair.

*Black River.*—At the head of the rock cut, a portion of the High Falls slide, 258 feet in length, was altogether rebuilt, decayed timbers in the foundations were removed and new ones were substituted; considerable blocking was also done to provide a sure footing for the bents carrying the superstructure, the bents are of 12-inch

square pine timber, ranging in height from 5 feet to 12 feet; fifty-one cross-sills, eighty-three posts and eighty-three braces, as well as the sheeting in sides and bottom of slide and the longitudinal stringers, had all to be laid new, and foot boards were placed for the whole length of slide, old plank taken out of the works having been used for this purpose.

*Petewawa River.*—At the mouth of this river, fifteen new connecting chains were placed in the retaining wall.

At *First Chute station*, a new waste gate was built to the south of the slide entrance; it is 14 feet in width, sheeted on bottom and supplied with the necessary stop-logs; the side piers of the waste gate are 7 feet high; the dam to north of slide was also repaired, it being necessary to renew several of the stringers and ties; the sheeting of this dam was laid with new pine for a width of 25 feet, the length being 12 feet; the foot piers of slide, each 28 feet in length and 6 feet in width, were raised by the addition of a course of timber; a side pier, 32 feet long, 8 feet wide and 3 feet high, was built in the chute, on north side of slide, to protect the latter; and a pier supporting the guide boom at head of slide was raised 4 feet and filled with stone; the size of this pier is 18 feet square.

At *Second Chute Station* the waste gate to west of slide was increased in height by four feet; a portion of the main governing dam was rebuilt, and the slide was strengthened by additional blocking and bracing.

At *Thompson Rapids Station*, two angle irons were provided for the corners of the stop-log cheeks, and three drop logs were made for the sluiceway.

At *Poplar Chute*, the flat dam at head of the timber channel was removed and a pier was substituted, the new dam is 150 feet in length, 10 feet in width and of an average height of 8 feet, filled to the top with stone; two courses of timber were laid on the pier dam adjacent to the main dam, the length being 65 feet and the width 10 feet; five iron bars were secured at the outer end of the main dam, as a protection against excessive wear; and one of the guide boom piers, 15 feet square, was raised 5 courses and filled with stone.

At *McDonald Station*, a glance pier at foot of the slide was built with new timber, its length is 35 feet, the width 8 feet and the height 6 feet; four pieces of iron, $\frac{3}{4}$ by 4-inch by 18 feet, were fastened in the bottom of the sluiceway, and fifteen pieces of 4-inch sheeting, 12 feet long, were laid on the face of the main governing dam to south of slide entrance; two stop-logs, 8 by 16 inch by $20\frac{1}{2}$ feet, were made for the bulk-head, while a considerable quantity of rock was blasted at outlet of the slide to improve the channel at this place.

At *Cedar Lake Station*, six stop-logs were supplied for the retaining dam, these are 12 inches square and 21 feet long; three being for the sluiceway, and three for the waste gate.

*Dumoine River.*—At High Falls station, two stringers were placed in the apron of slide, and 12 bars of iron were set on its face; one of the side piers of slide, which had been sprung out of place, was jacked back to position and well spiked; the stringers in the main dam, and the sheeting on its face, were patched where required; in the rapids, extending over a distance of three thousand feet, some thirty rocks which interfered with the free descent of logs, were blasted, one of these reefs was 12 feet in length and 6 feet high, and most of the others required from three to six shots to dislodge them.

Last spring, the water in the Ottawa and its tributaries was extremely low, and at no time during the season did it attain a height equal to the average of other years. The maximum pitch was reached about 12th May, and after that date the water fell

rapidly but was checked somewhat at the end of June. In the later summer months, it was exceptionally low, and in consequence thereof, the slides were subjected to much wear and the greatest difficulty was experienced in passing the various "drives" of logs.

The following statement, furnished by the Collector of Public Works Revenue, shows the volume of business for the fiscal year:—

STATEMENT of number of logs, timber, etc., that passed through the Government slides and booms on the Ottawa river and its tributaries, during the fiscal year ended March 31, 1915:—

| | | |
|---|---|---|
| Saw logs | 4,154,855 | pieces. |
| Boom and dimension timber | 47,146 | " |
| Railroad ties | 50,286 | " |
| Fence posts | 25,466 | " |
| Telephone poles | 1,405 | " |
| | 4,279,158 | " |

Also 73,464¾ cords of pulp wood.

The revenue accrued on the above was $35,344.81.

In submitting the foregoing report,

I have the honour to be, Sir,

Your obedient servant,

R. F. H. BRUCE,

*Superintending Engineer Ottawa River Works.*

STATEMENT SHOWING EXPENDITURE FOR REPAIRS TO OTTAWA RIVER WORKS FOR FISCAL YEAR ENDED MARCH 31, 1915.

| Name of Work. | Province. | Electoral District. | Expenditure April 1 to November 30, 1914. | | Expenditure December 1 1914, to March 31, 1915. | | Expenditure April 1, 1914, to March 31, 1915. | |
|---|---|---|---|---|---|---|---|---|
| | | | $ cts. | $ cts | $ cts. | $ cts. | $ cts. | $ cts. |
| *Ottawa River—* | | | | | | | | |
| North Chaudiere Station | Quebec | District of Wright | 283 50 | | 284 95 | | 568 45 | |
| South Chaudiere Station | Ontario | City of Ottawa | 3 05 | | | | 3 05 | |
| | | | | 286 55 | | 284 95 | | 571 50 |
| *Tributaries of Ottawa River—* | | | | | | | | |
| Gatineau River | Quebec | District of Wright | 1,527 72 | | | | 1,527 72 | |
| Madawaska River | Ontario | South Riding of County of Renfrew | 2,193 44 | | 1,269 31 | | 3,462 75 | |
| Coulonge River | Quebec | County of Pontiac | 1,730 64 | | 968 95 | | 2,699 59 | |
| Black River | Quebec | County of Pontiac | 2,218 50 | | 1,322 55 | | 3,541 05 | |
| Petewawa River | Ontario | North Riding of Co. of Renfrew and Co. of Nipissing | 1,563 60 | | 2,413 03 | | 3,976 63 | |
| Dumoine River | Quebec | County of Pontiac | 189 50 | | 30 90 | | 220 40 | |
| | | | | 9,423 40 | | 6,004 74 | | 15,428 14 |
| | | | | 9,709 95 | | 6,289 69 | | 15,999 64 |

JOS. KENT,
*Accountant.*

ST. MAURICE RIVER WORKS.

(By F. X. T. BERLINGUET, Superintending Engineer.)

THREE RIVERS, October 24, 1914.

EUGÈNE D. LAFLEUR, Esq.,
Chief Engineer,
Department of Public Works,
Ottawa.

SIR,—The St. Maurice river flowing west to east about 350 miles, and draining the whole of that vast territory, is one of the largest tributaries of the River St. Lawrence. The drainage area is 16,200 square miles divided into the settled and the forest portion. The settled portion, with Three Rivers as natural centre, contains a large farming population. The forest portion covers an area of 15,000 square miles. Important industrial centres have been formed as Shawinigan Falls, Grand'Mere, La Tuque, etc., which utilize the natural resources of this vast region.

The population interested is about 50,000.

Timber driving is the first problem to be considered on the St. Maurice river.

During the commercial season 1914, the fluctuation of the water level on the St. Maurice river during the flotation of logs was extremely low; however 1,667,701 logs were driven and assorted at the river outlet, Three Rivers.

When the water was at its lower pitch, the foundation of 242 piers were examined also 81,695 lineal feet of booms and put in good condition for the next season. This work will be continued during the early spring months in order that everything will be in readiness for the opening of the commercial season 1915.

Since 60 years ago, the maintenance of booms has been performed by day-labour by the staff; the amount expended during the year may be summarized as follows:—

| | |
|---|---|
| Removing ice and placing booms | $7,490 84 |
| Staff | 16,432 66 |
| Alligators | 12,165 05 |
| Booms and winter quarters | 3,302 55 |
| Total | $39,391 10 |

Repairs may be summarized as follows:—

*Grandes Piles.*

2,643 lineal feet of pitchpine booms, divided into 25 pieces with a width of 5 feet.

*Shawinigan Falls.*

14 pieces of 8-ply booms, 15 inches deep.
5 " of 5-ply " " "
2 " of 15-ply " " "

giving a total length of 1,345 lineal feet.

*Shawinigan Slide.*

The log slide was rebuilt in steel and concrete on a length of 547·1 lineal feet.

*Les Gres.*

Three old piers were demolished to low water line.

*Cap Aux Corneilles.*

Two piers were rebuilt from low water line and two were sheathed. A piece of boom 150 feet long 6 feet wide was built.

*Three Rivers.*

The piers Nos. 11, 5, 9, 16, 6 and 7 at the outlet were repaired. A new pier 18 by 20 feet was built in the middle channel in front of the Gres Falls mill, at St. Christophe island.

The protection wall along the western side of Caron island was extended from pier No. 4, north to pier No. 5 in the eastern channel.

IMPROVEMENTS AT GRAND'MERE.

The Laurentide Company, Limited, has under construction at Grand'Mere on the St. Maurice river a concrete dam. The ultimate capacity of which will place the company among the largest power producers of Canada. This work was commenced in 1913 and is now under progress. For years previous, the company operated a dam and a power-house on the western shore, but it was not sufficient for the requirements of its industry.

Grand'Mere is 21 miles from Three Rivers on the St. Maurice river, which has at this site, a maximum run-off of 200,000 cubic feet per second at high water level.

With this proposed improvement, the effective head of the fall will be raised from 45 feet to 77 feet with intention to develop 180,000 horse-power.

It was necessary to raise the Government piers proportionately on a distance of 18 miles.

This work was performed by day-labour, was commenced during July, 1914, and is now under progress.

The above mentioned piers are completed with sheathing on their front face and an ice-breaker with a slope of one in one.

Two anchor piers were demolished to the actual low water level and the piers Nos. 1 and 2 on a height of 3 feet before the beginning of repairs.

*Pointe Madeleine.*

Four piers were raised at this site. The above-mentioned piers are completed with sheathing on their front face and an ice-breaker with a slope of one in one.

Nine anchor piers were demolished to the elevation 134 and the pier No. 10 before the beginning of repairs.

Two anchor piers, 25 by 25 by 12 feet were built during the last summer.

*St Jacques Des Piles.*

Seven piers were raised at this site.

The above mentioned piers are sheathed on their front face. Two anchor piers were demolished to the actual low water line, and the pier No. 8 was completely removed.

The wharf was raised from elevation 144 to elevation 162 on a length of 50 feet and a width of 20 feet, giving a total yardage of crib work of 666 cubic yards.

*Ste. Flore.*

Three piers were raised at this site. The piers Nos. 2 and 3 are not completely filled in with stone.

*Les Plaines.*

One pier was raised at this site.

*Grand'Mere.*

Six piers were raised at this site.

The crib work at this site is completely finished.

The total cost of these works is $128,341.50.

I have the honour to be, sir,

Your obedient servant.

F. X. T. BERLINGUET,

*Superintending Engineer, St. Maurice River Works.*

### Report on the Saguenay River Works.

(By P. E. Amiot, Superintending Engineer.)

Saguenay boom is situated on the River Saguenay, some four miles from Chicoutimi town.

During the fiscal year, 2,000 feet of new leaves of 60 feet and 80 feet in length by 3 and 4 feet in width, constructed with B.C. fir, 12 inches square, secured together at every 4 feet by 1-inch round iron, covered with 3-inch deals and bound together with 1-inch B.B.B. chain.

A pier, 20 feet in length, 20 feet square, is prepared and ready to be sunk, the necessary ballast is also on the site of the work.

Work started February 1, completed March 31, and was carried out by day labour.

## BRIDGES AND ROADS.

It may be stated that, in the older provinces of the Dominion, the Federal Government has confined itself, as a rule, to take under its exclusive control and make provisions towards the construction and maintenance of important interprovincial road bridges and bridges required across waterways.

In the sparsely settled districts of the Northwest Territories, the Government of Canada has undertaken to provide for the erection and maintenance of ordinary road bridges over large streams; bridges that are urgently needed to afford uninterrupted communication through trails and highways of national importance, which neither the municipalities to be more immediately benefited by the structures nor the territorial authorities most directly concerned, could be expected to erect and maintain at their sole expense.

During the last fiscal year, works have been executed on the following:—

## ONTARIO AND QUEBEC.

### Bridges at Ottawa, and Roadway and Bridge Approaches between Ottawa and Hull.

*Ordinary Repairs.*

*Laurier Bridge.*—Portions of the concrete sidewalks, on both sides of the approaches to this bridge, had to be repaired, as the foundations had settled very considerably. At the northern side of the western approach, the walk was renewed for a length of 55 feet by 9 feet in width, and for a length of 70 feet by 8 feet in width, the latter section being flanked with a retaining wall for its whole length, the height of the wall being 5 feet, with a width of 3 feet at base tapering to 2½ feet at top. At the southern side of the same approach, the walk was laid for a distance of 94 feet by 8 feet 8 inches in width, together with a retaining wall 33 feet long, 13 feet average height, and same width as the one on opposite side. In addition, the cap on the dry masonry wall was restored in concrete for a length of 25½ feet. At the eastern approach the sidewalk was renewed for a length of 43½ feet, with an average width of 7 feet on the northern side, and on the southern side the extent constructed was 47½ feet in length by 6 feet in width. The sandstone pavement had also settled at different places on both approaches. Where these defects occurred, the blocks were taken up and filling was placed underneath to make up the deficiency, when they were again laid to the proper grade. Some 500 superficial yards were treated in this manner.

*Chaudière Slide Bridge.*—The roadway of this bridge was cleaned frequently during the summer, the guard railings were repaired and the gratings and the drainage chambers at southern end of the bridge were kept free from rubbish.

*Union Bridge.*—The top course of planking on the roadway of this bridge, between the railway tracks and western side, was laid with red pine, 3 inches thick; the roadway was cleaned often, as were also the cast-iron gratings and waterways for drainage at both ends of bridge.

*Hull Slide Bridge.*—The roadway of this bridge was kept clean throughout the summer season.

*Roadway and Bridge Approaches between Ottawa and Hull.*—At the southern end of the Union bridge, a close board fence was reconstructed on the eastern side, the fence is 127 feet in length, ranging in height from 6 to 9 feet, it is provided with a suitable cap and baseboard, and received three coats of paint; the sandstone pavement was repaired at different places; the roadway was cleaned from time to time throughout the season; the pipe guard rails were also repaired and the weeper holes were kept clean to provide the proper drainage.

In the winter months, surplus ice and snow were removed from the sidewalks and roadways of the bridges at the Chaudière, also from the causeway between the cities of Ottawa and Hull, and when the sidewalks were in a slippery condition, a supply of sand was spread on their surfaces to prevent accidents to pedestrians. In spring, the necessary gutters were made to carry off the surface water.

*Pond Creek Bridge.*—At the western approach to this bridge, fourteen tons of broken stone were spread to bring the roadbed even with the planking on the bridge, as a considerable hollow existed at this place.

The work was done by the boom master at the Gatineau, with his staff employed during the season of navigation.

STATEMENT SHOWING EXPENDITURE FOR REPAIRS TO BRIDGES FOR FISCAL YEAR ENDED MARCH 31, 1915.

| Name of Work. | Province. | Electoral District. | Expenditure April 1, to November 30, 1914. | | Expenditure December 1, 1914, to March 31, 1915. | | Expenditure April 1, 1914, to March 31, 1915. | |
|---|---|---|---|---|---|---|---|---|
| | | | $ cts | $ cts | $ cts. | $ cts. | $ cts | $ cts |
| *Bridges at Ottawa, and Roadway and Bridge Approaches between Ottawa and Hull—* | | | | | | | | |
| Laurier Bridge | Ontario | City of Ottawa | 1,285 73 | | 75 89 | | 1,361 62 | |
| Chaudiere Slide Bridge | Ontario | City of Ottawa | 215 70 | | 190 04 | | 405 74 | |
| Union Bridge | Ontario and Quebec | City of Ottawa and District of Wright | 198 13 | | 889 55 | | 1,087 68 | |
| Hull Slide Bridge | Quebec | District of Wright | 10 25 | | | | 10 25 | |
| Roadway and Bridge Approaches between Ottawa and Hull | Ontario and Quebec | City of Ottawa and District of Wright | 952 34 | | 971 19 | | 1,923 53 | |
| Total for bridges at Ottawa | | | | 2,662 15 | | 2,126 67 | | 4,788 82 |
| | | | | | | | | 4,788 82 |
| Pond Creek Bridge | Quebec | District of Wright | | 26 46 | | | | 26 46 |
| Rapides-des-Joachims Bridges | Ontario and Quebec | North Riding Renfrew and Co. Pontiac | | 1,314 44 | | 184 12 | | 1,498 56 |
| Total | | | | | | | | 6,313 84 |

April 21, 1915.

JOS. KENT,
*Accountant.*

DES JOACHIMS.

An appropriation of $1,500 was authorized to make the most urgent repairs to these bridges, consequently a supply of plank was procured and the repairs were carried on as far as the sum available would permit. The main channel of the Ottawa river is spanned by three trusses, the central one being 225 feet in length and the other two, one at either end, 100 feet each. All the floor beams and one course of plank were renewed in the largest span and one of the smaller ones. No work was done to the third short span over the main channel nor to the two spans across the slide channel.

The remaining spans should be attended to as soon as an appropriation is available.

HAWKESBURY BRIDGE.

Hawkesbury, a town in Prescott county with a population of 4,000, is located on the Ottawa river, midway between Ottawa and Montreal.

Contract plans and specifications for a bridge over the Ottawa river, between Hawkesbury and Grenville, have been completed (the lighting system, however, has not been fully developed). The proposed right of way on south side was carefully staked across the property of the Hawkesbury Lumber Company. Tenders for substructure and approach roadways were received.

The property transfer for right of way on Grenville side has been completed and transfer on the Hawkesbury side is being proceeded with.

Expenditure to March 31, $1,103.74.

NORTH TIMISKAMING BRIDGE.

North Timiskaming, a village in Pontiac county, Que., is located at the mouth of the Quinze river, one mile from the boundary with the Province of Ontario. The country is becoming thickly settled, and the dangerous condition of the river in the spring and fall, as well as the growing traffic, would be greatly benefited by a bridge.

At its last session, Parliament appropriated $60,000 towards the construction of a bridge at this place, two miles below the head of lake navigation.

The bridge is to consist of two 238-foot through truss spans and two 75-foot deck truss spans, with reinforced concrete floor for 17½-foot roadway, and supported on three piers and two abutments of concrete on piling. The approach fills will provide for roadway on a grade of 5 per cent to the low banks and a reinforced concrete culvert where a creek on the east side has to be crossed. The through bridge will provide headroom 14½ feet and clearance 16 feet above regulated water surface of Lake Timiskaming; at this stage the principal pier will be 36 feet below the water line, and is underpinned by piles driven through some 50 feet of clay.

A contract was entered into with Messrs. Lynch, Peckham & Gorman for the construction of substructure and approaches of steel highway bridge over the Quinze river at North Timiskaming for the sum of $44,930 approximately. An extra $300 was authorized September 10, 1914, for additional unwatering at abutment No. 1, and an extra of $150 was authorized at same time for additional unwatering at pier No. 1.

Work was started June 25, 1914, and was in continuous progress to March 31, 1915. At the end of the fiscal year, the reinforced culvert, concrete abutments and two piers had been completed; the main pier footing was in place and work on this pier progressing favourably.

On account of scouring at site of abutment No. 1 and pier No. 1, additional excavation and materials were required in the work.

Expenditure to March 31:—

| | |
|---|---|
| Estimates to contractors | $36,570 02 |
| Salaries of inspectors, instrument man, disbursements, etc. | 2,760 04 |
| | $39,330 06 |

PORTAGE DU FORT.

Portage du Fort, a village in Pontiac county, is located on the north shore of the Ottawa river, some sixty miles above Ottawa, and is connected with the Ontario side of the river by two steel bridges over the north and south channels.

Work of replacing flooring of the south channel bridge was about 50 per cent completed on March 31 last. In April, this work was completed along with replacing the flooring of the north channel bridge. The work was finished on April 22.

New floor stringers and new wheel-guards were placed where necessary and a centre wheel-guard was added to divide traffic in opposite directions.

Expenditure to March 31, $504.44.

GRAND RIVER BRIDGE.

Grand River bridge is a highway bridge connecting the east and west banks of the Grand river at the village of York, in the County of Haldimand. It is about midway between the villages of Caledonia and Cayuga, the nearest railway stations. This bridge consists of four steel trestle spans 105 feet long each, supported by three stone-filled cribs and concrete piers and two masonry abutments, a timber trestle 166 feet long at west end of steel span and an earth and gravel approach to the west of trestle, 656 feet long.

The bridge was constructed by the Dominion Government in 1891.

Authority was received to make repairs, which were commenced on July 1 and were completed on September 30, 1914.

The work performed was as follows:—

(1) Renewal of nearly all stringers on two spans of steel trestle.

(2) General repairs to decking of steel bridge.

(3) Repairs in concrete to face of middle pier, due to erosion.

(4) Gravelling approach at both ends of bridge.

(5) Renewal of guard fences on timber approach.

(6) Scraping and brushing all steelwork on bridge.

(7) Two coats of superior graphite paint over all steelwork of bridge above and below and one coat on snow boards.

In the execution of the above work, approximately 2,000 f.b.m. white oak timber, 6,500 f.b.m. pine, 130 lbs. iron, 100 gallons of paint and 1¾ bbls. Portland cement were used.

Expenditure, $1,024.24.

MATAPEDIA MILITARY ROAD.

Matapedia military road is situated partly in Rimouski and Bonaventure counties, in the valley of Matapedia.

Matapedia road starts from Ste. Flavie, on the St. Lawrence river, and extends to Cross Point on the Restigouche, 110 miles from its starting point. The construction of this road began in 1857 and was completed in 1867 at a cost of $187,870.85. This road was repaired and kept in good order by the Government as a military road. After the construction of the Intercolonial, the greatest portion of this road was abandoned to the different municipalities along the road. There remains a portion of it, from Beaurivage to Millstream, a distance of nineteen miles, where there is no municipality.

Since Confederation, the expenditure for the reconstruction was $34,048.43, and for maintenance and repairs, a sum of $13,650.09 was expended.

The work done during the present fiscal year 1914-15, consisted in the repairing and the rebuilding of several bridges and culverts and the reconstruction of a portion of the highway, from Beaurivage to Millstream.

Expenditure, $4,559.83.

OTTAWA RIVER (CHATS FALLS).

*C. N. O. Ry. Bridge.*

This bridge, crossing the Ottawa river at Chats falls, was completed during the past fiscal year by the Canadian Northern Ontario Railway, in accordance with the plans approved by Order in Council of September 30, 1912, and as amended by Order in Council of September 24, 1913. The substructure was built December 3, 1912, to May 5, 1913, and the superstructure was erected September 15, 1914, to January, 1915. This bridge is some 1,600 feet in length, and consists of two through Pratt truss spans and ten deck plate girder spans resting on eleven concrete piers and two abutments.

OTTAWA RIVER (PORTAGE DU FORT).

*C. N. O. Ry. Bridge.*

At Portage du Fort, Que, the C.N.O. Ry. Co. crosses the Ottawa on one of the company's important bridges, which was built, as authorized by Order in Council of July 29, 1912, with minor exceptions; the piers being built with cutwaters on the upstream side instead of without, as authorized. The substructure was commenced August 2, 1912, and completed November 13, 1913. The superstructure was commenced February 24, 1914; the last girder placed September 17, 1914, and riveting was completed November 16, 1914. This structure, some 1,468 feet in length, consists of concrete abutments and twelve piers supporting two 50-foot tower and deck plate spans, eight plate girder spans and three half-deck riveted truss spans..

GRAND LAKE NARROWS.

*C. N. O. Ry. Bridge.*

Application was made and plans submitted by the Canadian Northern Ontario Railway, under the Navigable Waters Protection Act, for proposed bridge to be built across Grand Lake Narrows, township of Barron, District of Nipissing, Ont., 127 miles west of Ottawa. An examination was made and the application approved by Order in Council of September 11, 1914. This consists of rock fill embankments, aggregating 580 feet, with 70-foot through plate girder span on framed bent trestle abutments.

KIOSH-KOQUI LAKE, ONTARIO.

*C. N. O. Ry. Bridge Trestle.*

An inspection was made in July, 1914, of the C. N. O. Ry. bridge trestle built across Kiosh-Koqui lake, in the township of Pentland, District of Nipissing, 186.6 miles from Ottawa, on the C. N. O. Ry. This structure was authorized by Order in Council of September 24, 1913, and is some 2,000 feet in length with a maximum depth of 40 feet of water; there is a 50-foot opening near one end, with deck plate girder, for the purpose of carrying on lumbering operations.

MUSKRAT RIVER (MEATH STATION).

*C. P. Ry. Bridge.*

As authorized by Order in Council of June 15, 1912, the C. P. Ry. Co. proceeded with the construction of their new bridge across the Muskrat river, in order to do away

with the existing 600-foot trestle built skew to the stream over twenty years ago, and which intersects the highway bridge.

Piles were driven to a great depth for the footing of concrete abutments; during the course of placing the ballast fills to said abutments, the work settled down and virtually disappeared while, at the same time, the river bottom on either side was raised several feet. As the new line for this diversion is built through marshy soil, the company found it necessary to purchase additional land and cut a new channel for the river, to which the steel span (plate girder 87 feet 2 inches long) will be removed. This new channel is located some 900 feet from the originally proposed location of bridge.

STURGEON RIVER (MIDDLE CROSSING).

*C. N. O. Ry. Bridge.*

The bridge under construction by the Canadian Northern Ontario Railway across the Sturgeon river (middle crossing), District of Nipissing, Ont., at mile 257·6 from Ottawa, which was in use by work trains in March, 1914, was completed July 21, 1914, in accordance with the plans approved by Order in Council of April 5, 1913. This structure, 351 feet long, consists of three half-deck plate girder spans on concrete piers and abutments.

MANITOBA.

BRANDON.

*C. P. Ry. Bridge.*

The double tracking of the Canadian Pacific Railway Company's bridge, over the Assiniboine river at Brandon, as authorized by Order in Council dated June 22, 1912, was inspected and found to comply with conditions of the Order in Council.

BRANDON.

*G. T. Ry. Bridge.*

The Grand Trunk Pacific Railway bridge over the Assiniboine river at Brandon, as authorized by Order in Council dated December 18, 1913, was completed and inspected.

The coffer-dam was in such position that it might interfere with future navigation, and this was ordered to be removed, which was done, and the bridge finally inspected on August 29, 1914, and found to comply with the conditions of the Order in Council.

EMERSON.

*C. N. Ry. Bridge.*

The Canadian Northern Railway Company's bridge over the Red river, at Emerson, was rebuilt by that company in accordance with an Order in Council dated January 14, 1914, and amended June 5, 1914. This work was inspected and found to comply with the conditions of the Orders in Council.

KILDONAN.

*C. P. Ry. Bridge.*

The bridge of the Canadian Pacific Railway, Kildonan cut-off over the Red river, authorized by Orders in Council dated January 16 and June 10, 1913, was completed, and was inspected and found to comply with the conditions of the Orders in Council.

On November 6, 1914, settlement was noted in the embankment, east of the east abutment pier, and upon examination it was found that the east pier was settling. A total settlement of about 3·8 feet had occurred to November 30. An investigation showed that this was due to surcharged banks and not to the lowering of water at St. Andrews lock and dam.

A further investigation of the slides occurring near this bridge was made during the winter and the location and slope of the rock was determined. It was found that the rock sloped toward the Red river in such manner that the banks, when surcharged, would slide, especially when the clay stratum was moist. The investigation is not yet complete and the exact cause of these slides is not yet fixed.

The railway company have rebuilt the pier which settled and are again operating over this bridge.

SHELLMOUTH BRIDGE.

This bridge is situated on the Assiniboine river in the County of Marquette, township 22, range 29, west of principal meridian, on line of road allowance between sections 30 and 31.

The bridge was built in 1908 and painted at that time. Since then it was found necessary to repaint the bridge and the painting was started August 25 and finished September 19, being done by day labour.

The expenditure was $840.50.

WINNIPEG C. N. RY. BRIDGE.

*Assiniboine River.*

The Canadian Northern Railway bridge, over the Assiniboine river, at Winnipeg, as authorized by Order in Council dated August 16, 1912, was inspected and found to be constructed in accordance with the conditions of the Order in Council, except for the pile fenders. This matter was taken up with the railway company, who made application for a further Order in Council relieving them from the necessity of constructing this pile fender. It was recommended that a floating fender would be more suitable than the pile fender, as the depth overlaying rock is insufficient to give piles the necessary holding. In accordance with this request and recommendation, a further Order in Council was passed, relieving the railway company of the requirement to build a pile fender and requiring them to place a floating fender whenever, in the opinion of the department, it is considered necessary in the interests of navigation.

WINNIPEG.

*C. P. Ry. Bridge.*

The double tracking of the Canadian Pacific Railway Company's bridge, over the Red river at Winnipeg, as authorized by Order in Council dated May 2, 1912, was completed and inspected and found to comply with the conditions of the Order in Council.

SASKATCHEWAN.

SASKATOON BRIDGES.

Pursuant to instructions dated May 29, the clearances of the various bridges over the South Saskatchewan river near Saskatoon have been investigated. Beginning with the G. T. P. Railway bridge, two miles above the centre of the city, accurate levels were run connecting with bottom chord and water surface at C. N. R. bridge, old traffic bridge, new concrete bridge at 25th street and C. P. R. bridge in the north and

about four and a half miles from starting point. Geodetic survey elevations were also carried to the crossing of the South Saskatchewan by the C. N. Railway five miles east of Warman and the clearances of that bridge ascertained. The above surveys were completed and report forwarded during the latter part of June, 1914.

## Alberta.

### BOW RIVER BRIDGE AT BANFF.

The steel bridge crossing the Bow river in the town of Banff, Rocky Mountain Park, Calgary, Alberta, was inadequate to carry the heavy tourist and other summer traffic, and it was found necessary to arrange and design another bridge to occupy this position.

It became necessary to remove the old bridge to allow of the new bridge being built, and the work of removal was carried out during the months of December, 1914, and January and February, 1915, for a distance of 60 feet down stream from the line occupied so that the supporting piers would be clear of all excavation and obstruction to the work of building the new reinforced bridge.

Temporary piers were constructed of timber, three rows of piles, 12 inches diameter placed 5 feet centres and penetrating bed of stream an average of 8 feet, capped, cross-braced and anchored by drift bolting to piles. The piers are 40 feet long and 10 feet wide.

Both abutments were built in a similar manner, anchored to bank and thoroughly braced. Up-stream ends of piers and abutments are protected with 8 by 8 cribbed cut-waters secured to piling and filled with rock. Other loose rock is piled in front as protection.

Approaches on north end are constructed of bents placed 7 feet centres, braced, cross-braced and covered with 8-inch decking, with footpath fenced and graded.

Approach on south end was similarly treated and fanned out to receive traffic.

The whole old bridge site was cleared of rubble piers, cribbing and abutments and left in a position so that work could be commenced on new bridge without interruption.

This work was carried out by day labour.

### EDMONTON BRIDGE.

The Edmonton bridge crosses the North Saskatchewan river between Edmonton and Strathcona (now part of the city of Edmonton). It is 700 feet long between abutments and consists of four 175 feet spans. The roadway is 17 feet wide and there are two sidewalks each having a width of 7 feet. The bridge is constructed with steel superstructure in the form of Pratt trusses of seven 25 feet panels each. The approximate dead load per lineal foot is 2,420 lbs. The piers and abutments are of concrete, approximately 43 feet high above the river bed. These are erected on concrete footings deposited in caissons in which bearing piles were driven before the concrete was deposited.

This bridge was constructed in the year 1899 by this department. In 1901, an indenture was drawn up by which the Edmonton, Yukon and Pacific Railway Company (now incorporated with the Canadian Northern system) was allowed to place its track upon the bridge and to run trains across, subject to certain responsibilities with regard to accidents, improvements, etc. In November, 1908, an agreement was entered into whereby the Edmonton Radial (electric) Railway, belonging to the city of Edmonton, was allowed to place rails upon the bridge, and a street car service was inaugurated between Edmonton and Strathcona. This agreement also was subject

to certain conditions whereby the Edmonton Radial Railway assumed responsibility with regard to directing traffic and the up-keep of the bridge. At the beginning of the fiscal year 1911-12, instructions were issued by this department that the cost of all repairs to this bridge should be divided equally between the Edmonton Radial Railway and the Canadian Northern Railway Company and the Dominion Public Works Department. Following this, an offer made by the city of Edmonton to do all the work in connection with repairs to the bridge was accepted, the expense of same to be divided as above.

There has been returned for payment on account of repairs for the past fiscal year, the sum of $975.68.

The repairs carried out during 1914-15, consisted in putting creosoted paving blocks on the roadway, and labour and material incidental thereto.

It might be mentioned that this bridge does not require the amount expended for maintenance and repairs as it did formerly, owing to the fact that the high level bridge, now in operation, carries a very large portion of the street railway, highway and pedestrian traffic.

## CEMENT LABORATORY.

OTTAWA, August 10, 1915.

E. D. LAFLEUR, Esq.,
Chief Engineer,
Public Works Department.

SIR,—I have the honour to transmit herewith the Annual Report of the Dominion Testing Laboratory for the year ended March 31, 1915.

During the last twelve months, 5,894 samples were received by this laboratory for test purposes, which number shows a decrease over the same period last year; the reduction in our work is caused by the cutting down of nearly all large public works under this department, which is no doubt due to the war.

During the year, approximately 25,000 briquettes were manufactured, and 302 specific gravity, 260 quantitative analysis, 50 qualitative analysis, two tensile strength tests on steel bars, eight complete tests on bricks, thirty-one complete tests on sand and gravel and four waterproofing tests, were made.

Of the 5,894 samples received, 5,777 passed the standard specifications and 117 failed and were condemned. Of the samples condemned, 100 were Lehigh Portland cement, nine sand and gravel, and eight unmarked cement.

The samples received were from the following:—

| | |
|---|---|
| Engineers of the Public Works Department | 5,769 |
| Architects of the Public Works Department | 67 |
| Manufacturers | 12 |
| Marine and Fisheries Department | 7 |
| Militia and Defence Department | 5 |
| Unknown place | 5 |
| Railways and Canals Department | 4 |
| Outside Contractors | 3 |
| Outside Engineers | 1 |
| Deputy Minister, Public Works Department | 1 |

The following table shows the number of samples of the different brands received.

| | |
|---|---|
| Canada | 3,229 |
| Star | 844 |
| Belleville | 759 |
| International | 322 |
| Lehigh | 188 |
| Unmarked | 161 |
| Sand | 16 |
| Waterproofing | 10 |
| Sand and gravel combined | 9 |
| Samson | 125 |
| Pyramide | 123 |
| Doric | 82 |
| Sun | 9 |
| Hanover | 1 |
| Bricks | 8 |
| Gravel | 6 |
| Iron bars | 2 |

I have the honour to be, sir,

Yours obediently,

GEO. E. PERLEY,
*Director.*

## CONCLUSION

Owing to the terrible war now raging, in which the Dominion has assumed its share, it was wisely decided that only works placed under contract or nearing completion and works of a very pressing nature should receive the attention of this branch of the service, therefore the increase in expenditure on harbour and river works is not nearly as large as it has been within the past few years. Works were maintained, repairs made and everything done in preparation for the resumption of the era of prosperity which is checked by the war and its consequences. In closing this report, I wish to extend to all the officers under my control, including those at headquarters, my most sincere thanks for the ability exercised and the assistance rendered in executing the different works placed under the control of this branch of the Department.

EUGENE D. LAFLEUR,
*Chief Engineer.*

# PART V

# REPORT ON GOVERNMENT TELEGRAPH LINES

FOR THE

FISCAL YEAR ENDED MARCH 31, 1915

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF THE GENERAL SUPERINTENDENT,
OTTAWA, ONT., October 13, 1915.

R. C. DESROCHERS, Esq.,
Secretary, Department of Public Works.

SIR,—I beg to submit herewith my report on the Government Telegraph Service for the fiscal year ended March 31, 1915.

This report, as usual, is prefaced by a list to the present date of the land lines and cables in operation; with data of lengths, year of construction, number of offices at present established, and an estimate of the traffic handled in each instance.

The usual tabular statement giving list of offices, operating staff, etc., in the several districts are appended to the report; likewise the tariff sheets showing the rates charged for messages on the several lines.

I have the honour to be, sir,
Your obedient servant,

D. H. KEELEY,
*General Superintendent.*

# THE GOVERNMENT TELEGRAPH SERVICE

## DOMINION OF CANADA.

### HEAD OFFICE: DEPARTMENT OF PUBLIC WORKS, OTTAWA.

(March 31, 1915.)

EXECUTIVE.

The Hon. R. Rogers, Minister of Public Works.
J. B. Hunter, Esq., Deputy Minister of Public Works.

STAFF AT HEADQUARTERS.

D. H. Keeley, General Superintendent.
M. W. Crean, Technical Assistant to General Superintendent.
J. E. Gobeil, Technical Assistant to General Superintendent.
Miss E. D. McClosky, Secretary to General Superintendent.
Miss A. Ranger, Assistant Secretary to General Superintendent.
Miss F. G. Watterson, Second Assistant Secretary to General Superintendent.
P. G. Burgess, Accountant Telegraph Branch.
J. E. Bray, Assistant Accountant Telegraph Branch.

GENERAL INSPECTORS.

A. B. McDonald, North Sydney, Cape Breton, lines in Nova Scotia and New Brunswick.
J. S. Macdonald, Edmonton, Alta., lines in Northwest and British Columbia south.

SUPERINTENDENCIES.

Edwin Pope, Quebec, supt., North Shore and G.N.W. traffic.
P. E. Vignault, Seven Islands, dist. supt., North Shore, East Bersimis.
J. P. Pouliot, dist. supt., Quarantine line, etc., to Grosse Isle.
A. Malouin, dist. supt., West Point, Anticosti Island.
A. Le Bourdais, Grindstone, dist. supt., Magdalen Islands.
J. Dumulon, Ville Marie, P.Q., local supt., Timiskaming District.
D. C. Dawson, St. John, N.B., dist. supt., Cape Breton system.
J. B. Parker, Grand Manan, N.B., dist. supt., Bay of Fundy system.
J. McR. Selkirk, Leamington, Ont., dist. supt., Pelee Island system.
Robt. C. Macdonald, Edmonton, Alta., dist. supt., Northwest Territories.
Wm. Dee, Victoria, dist. supt., Vancouver Island lines.
W. H. Stevens, Kamloops, B.C., supt., Kamloops-Okanagan.
J. T. Phelan, Vancouver, B.C., supt., Yukon system.
G. S. Fleming, Whitehorse, Y.T., acting dist. supt., Atlin-Boundary.
F. W. Dowling, Prince Rupert, B.C., dist supt., Atlin-Prince Rupert.
C. E. Gooding, Ashcroft, B.C., dist. supt., Ashcroft-Hazleton.

## GOVERNMENT TELEGRAPH SERVICE.

| Location of Lines. | Points connected. | Year. | Length of Lines. | | | Number of Offices. | Messages Sent. |
|---|---|---|---|---|---|---|---|
| | | | Land Lines. | Cables. | Total. | | |
| | | | Miles Wire. | Kt's. | | | |
| Newfoundland.. | Port au Basque—Cape Ray | 1883 | 14 | .. | 14 | 2 | |
| Nova Scotia .... | North Sydney—Meat Cove (with loops).. | 1880–02 | $168\frac{3}{4}$ | ..... | | | |
| " .. | Across Bras d'Or Channel | 1880 | ..... | $\frac{1}{4}$ | | | |
| " .. | " St. Anns Harbour (Englishtown). | 1887 | ..... | $\frac{1}{4}$ | 170 | 25 | |
| " .. | " Ingonish Harbour | 1887 | ..... | $\frac{1}{4}$ | | | |
| " .. | " French River | ..... | ..... | $\frac{1}{4}$ | | | |
| " .. | Big Bras d'Or—Kempt Head | 1904 | 20 | ..... | 20 | 3 | |
| " .. | Meat Cove—St. Pauls Island | 1890 | ..... | 20 | 23 | 1 | |
| " .. | On St. Pauls Island | 1890 | 3 | ..... | | | |
| " .. | Bay St. Lawrence to Money Point | 1907 | 8 | ..... | 8 | 4 | |
| " .. | Mabou—Meat Cove | 1887–00 | $116\frac{1}{4}$ | ..... | $116\frac{1}{4}$ | 12 | |
| " .. | Barrington—Cap Sable | 1883 | 16 | .... | | | |
| " .. | Across Bear Point Channel | 1885 | ..... | $1\frac{1}{2}$ | $17\frac{3}{4}$ | Leased. | |
| " .. | " Lt. House Channel | 1883 | ..... | $\frac{1}{3}$ | | | |
| " .. | Mabou—Port Hawkesbury | 1903 | $41\frac{5}{4}$ | ..... | $73\frac{3}{4}$ | 7 | |
| " .. | Port Hawkesbury—St. Peters | 1903 | 32 | ..... | | | |
| " .. | St. Peters—Main-à-Dieu | 1904 | $83\frac{1}{4}$ | ..... | | | |
| " .. | Main-à-Dieu—Scatari | 1902–09 | 1 | $3\frac{1}{2}$ | $133\frac{1}{2}$ | 18 | |
| " .. | On Scatari Island | 1904 | $7\frac{1}{4}$ | ..... | | | |
| " .. | Gabarus—North Sydney | 1904 | $38\frac{1}{2}$ | ..... | | | |
| " .. | Little Bras d'Or—Kempt Head | 1905 | $34\frac{1}{2}$ | .. | $34\frac{1}{2}$ | 6 | |
| " .. | North Sydney—Eskasoni | 1905 | 31 | .. | 31 | 10 | |
| " .. | Eskasoni—Grand Narrows | 1908 | 22 | ..... | 22 | | |
| " .. | Grand Narrows—Shenacadie—Beaver Cove | 1910 | $15\frac{1}{4}$ | .... | $15\frac{1}{4}$ | 3 | |
| " .. | Leitches Creek—Steeles Crossing (loop).. | 1910 | 28 | ..... | 28 | | |
| " .. | Baddeck—Little Narrows | 1910 | $19\frac{1}{2}$ | ... | $19\frac{1}{2}$ | | |
| " .. | North Sydney—Little Bras d'Or (second wire) | 1906 | 6 | ..... | 6 | | 18,104 |
| " .. | Grand River - Enon | 1907 | $19\frac{1}{2}$ | .... | $19\frac{1}{2}$ | 2 | |
| " .. | Enon—Gabarus | 1909 | 29 | ..... | 29 | 2 | |
| " .. | Strathlorne—Wycocomagh | 1909 | $33\frac{1}{2}$ | .. | $33\frac{1}{2}$ | 6 | |
| " .. | S. W. Margaree—Whycocomagh—Little Narrows | 1912 | $38\frac{1}{2}$ | ..... | $38\frac{1}{2}$ | 8 | |
| " .. | Loch Ban—Scottsville | 1912 | 7 | ..... | 7 | | |
| " .. | Whycocomagh—Orangedale | 1912 | 8 | ..... | 8 | 5 | |
| " .. | North Sydney—Sydney Mines—Florence | 1912 | 7 | .... | 7 | | |
| " .. | Little Narrows—Washabuck | 1912 | 12 | ..... | 12 | 4 | |
| " .. | Loop, Eskasoni—McAdams Lake | 1912 | 5 | ... | 5 | | |
| " .. | Grand Narrows—Lower Shenacadie—Beaver Cove | 1912 | $15\frac{1}{4}$ | ..... | $15\frac{1}{4}$ | | |
| " .. | Baddeck, Nyanza—Big Intervale | 1913 | $39\frac{1}{2}$ | ..... | $39\frac{1}{2}$ | 6 | |
| " .. | Brook Village—Glendale | 1914 | 32 | ..... | 32 | | |
| " .. | | | | | | | |
| | *Port Hood, Island Branch :* | | | | | | |
| | (Length of construction in loop.) | | | | | | |
| | On mainland at Port Hood | 1907 | $\frac{1}{2}$ | .. | | | |
| " .. | Port Hood—Smiths Island | 1907 | ..... | 2 | | | |
| " .. | On Smiths or Inner Island | 1907 | 4 | .... | $13\frac{1}{2}$ | 4 | |
| " .. | Smiths Island to Henry Island | 1907 | ..... | 3 | | | |
| " .. | On Henry or Outer Island | 1907 | 4 | ..... | | | |
| " .. | | | | | | | |
| | Chatham—Escuminac—Point Sapin | 1885 | $52\frac{1}{4}$ | ..... | $52\frac{1}{4}$ | 15 | |
| New Brunswick. | | | | | | | 1,028 |
| | Carried forward | ..... | 1,013 | $31\frac{1}{2}$ | $1,044\frac{1}{2}$ | 143 | |
| | | | | | | | 19,132 |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

| Location of Lines. | Points Connected. | Year. | Length of Lines. | | | Number of Offices. | Messages Sent. |
|---|---|---|---|---|---|---|---|
| | | | Land Lines. | Cables. | Total. | | |
| | | | Miles Wire. | Kt's. | | | |
| | Brought forward | | 1,013 | 31½ | 1,044½ | 143 | 19,132 |
| | *Bay of Fundy System :* | | | | | | |
| New Brunswick. | Eastport—Campobello | 1880 | ..... | 1¾ | 45¾ | 12 | 2,460 |
| " | On mainland Eastport | 1880 | ½ | .. | | | |
| " | On Campobello Island | 1880 | 7½ | ..... | | | |
| " | Campobello—Grand Manan | 1880 | ..... | 7¾ | | | |
| " | On Grand Manan Island | 1880 | 25½ | ..... | | | |
| " | Grand Harbour—Cheneys Island | 1890 | .... | ½ | | | |
| " | On Cheneys Island | 1890 | ¾ | ..... | | | |
| " | Cheneys Island—Whitehead Island | 1890 | ..... | ¾ | | | |
| " | Partridge Island—Fort Dufferin | 1900 | ..... | ¾ | | | |
| " | " " | 1910 | ..... | ¾ | | | |
| | *Gannet Rock Branch :* | | | | | | |
| " | Seal Cove—Big Wood Island | 1910 | ¼ | 1½ | 11¼ | 3 | † |
| " | On Big Wood Island | 1910 | 1½ | .. | | | |
| " | Big Wood Island—Little Wood Island | 1910 | ..... | ½ | | | |
| " | On Little Wood Island | 1910 | ¼ | ..... | | | |
| " | Little Wood Island—Gannet Rock | 1910 | ..... | 7¼ | | | |
| | *Magdalen Island System :* | | | | | | |
| Quebec | Meat Cove, C.B.—Magdalen Islands | 1880 | ..... | 55 | 184¾ | 18 | 2,990 |
| " | On Magdalen Island | 1881-02 | 83½ | ½ | | | |
| " | Grosse Isle—Brion Island | 1902 | .. | 11 | | | |
| " | On Brion Island to Dingwalls | 1902 | 1 | .... | | | |
| " | On Brion Dingwalls to Lt. House | 1909 | 5 | ..... | | | |
| " | House Harbour—Pointe Basse (loop wire) | 1902 | 8 | .... | | | |
| " | Pointe Basse—South Beach (loop wire) | 1905 | 6 | .... | | | |
| " | Grindstone—Barachois (loop wire) | 1909 | 6 | .... | | | |
| " | Amherst Island—Entry Island | 1910 | 2 | 6¾ | | | |
| | *Anticosti System :* | | | | | | |
| " | Gaspé—L'Anse à Fougère | 1881 | 28 | .... | 316½ | 9 | 3,240 |
| " | L'Anse à Fougère—Anticosti | 1881 | ..... | 44½ | | | |
| " | On Anticosti Island | 1881-90 | 223¼ | .... | | | |
| " | Anticosti—Long Point Mingan | 1890 | ..... | 21 | | | |
| | *Chicoutimi Dist.:* | | | | | | |
| " | Bay St. Paul—Chicoutimi | 1881-04 | 98 | ..... | 98 | 5 | |
| " | St. Alexis—St. Catherines Bay | 1904 | 78 | ..... | 78 | 5 | |
| " | Murray Bay—Bay St. Paul | 1904 | 32½ | ..... | 32½ | 2 | |
| " | Bay St. Paul—Petite River | 1904 | 13 | .... | 13 | 1 | |
| " | Chicoutimi—St. Charles | 1903 | 31½ | ..... | 46½ | 10 | |
| " | St. Anne—Lac Claire | 1903 | 7 | ..... | | | |
| " | St. Anne—St. Fulgence | 1903 | 8 | .... | | | |
| " | St. Fulgence—Sacré-Cœur | 1905 | 73½ | ..... | 73½ | 4 | |
| " | Murray Bay—St. Catherines Bay (2 wire) | 1904 | 53 | .... | 53 | ..... | |
| " | St. Alexis—Chicoutimi (2nd wire) | 1905 | 14½ | ..... | 14½ | ..... | |
| | Carried forward | | 1,820¾ | 191 | 2,011¾ | 212 | 27,822 |

* Included in Bay of Fundy System.

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

| Location of Lines. | Points Connected. | Year. | Length of Lines. | | | Number of Offices. | Messages Sent. |
|---|---|---|---|---|---|---|---|
| | | | Land Lines. | Cables. | Total. | | |
| | | | Miles Wire. | Kt's. | | | |
| | Brought forward | | 1,820¾ | 191 | 2,011¾ | 212 | 27,822 |
| | *Chicoutimi Dist.*—Con. | | | | | | |
| Quebec | St. Charles—La Pipe | 1907 | 30 | | 30 | 4 | |
| " | La Pipe—Peribonka | 1908 | 17 | | 17 | 2 | |
| " | Bay St. Paul—St. Placide | 1908 | 8½ | | 8½ | 1 | |
| " | Tache—St. Louis de Nazaire Loop | 1912 | 5 | | 5 | 1 | |
| | *North Shore Line:* | | | | | | |
| " | Murray Bay—Chateau Bay (Tadousac) | 1881-01 | 947¼ | | 949½ | 69 | 32,313 |
| " | Across Saguenay River at Tadousac | 1883 | | 1¼ | | | |
| " | " " " " | 1909 | | 1 | | | |
| " | Chateau Bay—Belle Isle* | 1901 | | | | | |
| " | Bersimis—Godbout | 1904-05 | 114 | | 114 | | |
| " | St. Simeon to Cap Salmon Lt. (loop wire) | 1909 | | | 4 | 1 | |
| " | Harrington—Harrington Island | 1909 | 1¼ | 3¼ | 4½ | 1 | |
| | *Quarantine System:* | | | | | | |
| " | Quebec—L'Ange Gardien | 1885 | 13 | | | | |
| " | L'Ange Gardien—Orleans Island | 1885 | | | | | |
| " | " 3 lengths | 1906-09 | | 2¼ | | | |
| " | On Orleans Island | 1885 | 29¼ | | | | |
| " | Orleans Island—Isle Reaux | 1889 | | 2 | | | |
| " | " (2nd cable) | 1910 | | 2¼ | | | |
| " | On Isle Reaux | 1889 | 2½ | | 80¼ | 11 | 763 |
| " | Isle Reaux—Grosse Isle | 1889 | | 2 | | | |
| " | " " (2nd cable) | 1910 | | 2 | | | |
| " | On Grosse Isle (all told) | 1885-94 | 3¼ | | | | |
| " | St. Jean—Ste. Famille (loop) | 1904 | 11 | | | | |
| " | St. François—St. François Nord (looped wire) | | 10 | | | | |
| " | St. François—Baie St. Paul† | 1906 | | | | | |
| " | Crane Island to Montmagny | 1905-09 | | 5 | 5 | | |
| " | On Crane Island | 1905 | 3 | | 3 | 5 | 1,740 |
| " | Crane Island to Grosse Isle | 1907 | | 5 | 5 | | |
| " | Beauport—Laval | 1909 | 15 | | 15 | 4 | |
| " | Orleans Island Telephone System | 1910 | 68 | | 68 | 7 | 3,601 |
| " | Kippewa Dam—Ville Marie | 1910 | 33½ | | 78½ | 9 | 1,037 |
| " | Ville Marie—North Timiskaming | 1911 | 45 | | | | |
| " | St. Isidore Branch | 1912 | 3½ | | 3½ | 1 | |
| " | Crane Island—Goose Island | 1912 | 10 | | 10 | 2 | |
| " | Charlesbourg—Lake Beauport—Stoneham | 1913 | 52¼ | | 52¼ | 8 | 1,075 |
| " | Lake St. Charles—St. Gerard | 1914 | 34⅓ | | 34⅓ | 4 | |
| | *Pelee Island System:* | | | | | | |
| Ontario | Leamington—Point Pelee | 1889 | 12 | | 45¾ | 18 | 565 |
| " | Leamington Dock—Pelee Island | 1901 | | 17¼ | | | |
| " | On Pelee Island | 1889-00 | 16½ | | | | |
| | *Northwest Lines:* | | | | | | |
| Northwest | Qu'Appelle—Edmonton | 1883 | 607 | | 607 | 16 | |
| " | St-Paul—Durlingville | 1912 | 48 | | 48 | 3 | |
| " | Edmonton—Athabaska Landing | 1904 | 98 | | 98 | 3 | |
| " | Athabaska Landing—Mirror Landing | 1909 | 70 | | 70 | 1 | |
| | Carried forward | | 4,133¼ | 235 | 4,368¼ | 382 | 68,916 |

* This cable (Chateau Bay—Belle Isle) 22¼ knots, was withdrawn in 1909.

† This cable, 30 knots, was withdrawn in 1910.

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

| Location of Lines. | Points Connected. | Year. | Lenght of Lines. | | | Number of Offices. | Messages Sent. |
|---|---|---|---|---|---|---|---|
| | | | Land Lines. | Cables. | Total. | | |
| | | | Miles Wire. | Kt's. | | | |
| | Brought forward | | 4,133¼ | 235 | 4,368¼ | 382 | 68,916 |
| | *Northwest Lines*—Concluded. | | | | | | |
| Northwest | Mirror Landing—Peace River | 1910 | 199 | .... | 199 | 4 | |
| " .... | Peace River—Dunvegan | 1911 | 74 | .... | 74 | 2 | |
| " .... | Dunvegan—Lake Saskatoon | 1912 | 76 | .. | 76 | 2 | |
| " .... | Grand Prairie City Loop | 1912 | 16 | .... | 16 | 1 | |
| " .... | Lake Saskatoon—Fort St. John | 1914-15 | 145 | .... | 145 | 2 | |
| " .... | Peace River—Shaftsbury | 1911 | 15 | .. | 15 | 4 | |
| " .... | Athabasca—Fort McMurray | 1914-15 | 245 | .... | 245 | 4 | |
| " .... | Athabasca—Lac la Biche (Plamondonville) | 1914 | 58 | .... | 58 | 1 | |
| " .... | Moosejaw—Wood Mountain | 1885 | 107 | .... | 107 | 4 | |
| " .... | Wood Mountain—Willow Bunch | 1904 | 39 | .... | 39 | 2 | 73,049 |
| " .... | Gravelburg Loop | 1910 | 38 | .... | 38 | 1 | |
| " .... | Leeville Loop | 1912 | 28 | .... | 28 | 1 | |
| " .... | Saskatoon Loop | 1892 | 28 | .... | 28 | 1 | |
| " .... | Edmonton—Indian Agency—Stony Plain | 1904 | 32 | .... | 32 | 5 | |
| " .... | Edmonton—St. Albert | 1887 | 9 | .... | 9 | 1 | |
| " .... | St. Albert—Qui Barre—Alexandre | 1902 | 25 | .... | 25 | 3 | |
| " .... | Duck Lake—Batoche | 1902-10 | 9 | .... | 9 | 2 | |
| " .... | Duck Lake—Indian Agency | 1902 | 3½ | .... | 3½ | 3 | |
| " .... | Lloydminster Loop | 1904-09 | 58 | .... | 58 | 1 | |
| " .... | Andrew Loop | 1904 | 10 | .... | 10 | 1 | |
| " .... | Andrew—Whitford | 1905 | 7 | .... | 7 | 1 | |
| " .... | Lamont Loop | 1910 | 7 | .... | 7 | 1 | |
| " .... | Lupton Loop | 1906 | 2 | .... | 2 | 1 | |
| " .... | Fort Qu'Appelle—File Hills Agency | 1907 | 28 | .... | 28 | 4 | |
| " .... | Saddle Lake—Industrial School | 1900 | 6½ | .... | 6½ | 1 | |
| " .... | Kamsack—Indian Agency | 1907 | 6½ | .... | 6½ | 2 | |
| " .... | Kamsack—Indian Agency—Pelly | 1910 | 17½ | .... | 17½ | 4 | |
| " .... | Battleford—Green Lake | 1912 | 165 | .... | 165 | 4 | |
| " .... | Meota Loop | 1912 | 20 | .... | 20 | 1 | |
| " .... | Grouard—High Prairie | 1912 | 25 | .... | 25 | 5 | |
| " .... | High Prairie—Prairie River | 1913-14 | 12 | .... | 12 | 6 | |
| " .... | Sintaluta—Assiniboia Reserve | 1913 | 8 | .... | 8 | 1 | |
| British Columbia | Victoria—Banfield Section | 1891 | 169 | .... | 169 | 12 | |
| " . | Alberni—Banfield Section | 1899 | 53 | .... | 53 | 2 | |
| " . | Alberni—Clayoquot Section | 1902 | 95¼ | 2¼ | 97½ | 5 | |
| " . | Clayoquot—Nootka Section | 1913 | 61⅝ | 12⅜ | 74 | 5 | |
| " . | Clayoquot Branch | 1913 | 1 | ⅛ | 4⅛ | 2 | |
| " . | Toquart—Sechart Section | 1907 | 7½ | 2 | 9½ | 1 | |
| " . | Tofino—Mosquito Harbour, Bear River | 1911-14 | 45½ | 3⅜ | 49¾ | | |
| " . | Clayoquot Sound—Leonard Is. Light. | | | | | | |
| " . | Nanaimo—Comox—Campbell River Sec. | 1893-08 | 118 | .... | 118 | 8 | |
| " . | Parksville—Alberni Branch | 1895 | 30 | .... | 30 | 1 | |
| " . | Comox—Cape Lazo Branch | 1910 | 6 | .... | 6 | 0 | |
| " . | Union Bay—Denman & Hornby Islands | 1907 | 23 | 2 | 25 | 4 | 64,313 |
| " . | Nanaimo—Gabriola Island | 1909 | 18¼ | ¾ | 19 | 5 | |
| " . | Campbell River—Powell River | 1910 | 58⅝ | 13¾ | 72⅜ | 10 | |
| " . | Powell River—Vancouver Section | 1913 | 104½ | 12 | 116½ | 15 | |
| " . | Campbell River—Hardy Bay Section | 1914 | 158 | 44½ | 202½ | 12 | |
| " . | Vancouver—Squamish Section | 1914 | 41½ | .... | 41½ | 4 | |
| " . | Salt Spring Island Line | 1902-14 | 86 | 7¾ | 93¾ | 21 | |
| " . | Sidney—Gauges Line | 1910 | 21 | 2½ | 23½ | 0 | |
| " . | Chemainus—Kuper—Thetis Islands | 1912 | 3½ | 4 | 7½ | 6 | |
| " . | Saanichton—James Island | 1912 | 3½ | 1 | 4½ | 2 | |
| " . | Sydney and Sydney Island | 1910 | 3 | 3 | 6 | 2 | |
| " . | Bamberton Works, Keatings Branch | 1914 | .... | 1 | 1 | 1 | |
| | Carried forward | | 6,800¼ | 307¼ | 7,107½ | 575 | 206,278 |

## GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

| Location of Lines. | Points Connected. | Year. | Lenght of Lines. | | | Number of Offices. | Messages Sent. |
|---|---|---|---|---|---|---|---|
| | | | Land Lines. | Cables. | Total. | | |
| | | | Miles Wire. | Kt's. | | | |
| | Brought forward | | 6,800¼ | 307¾ | 7,107½ | 575 | 206,278 |
| | *British Columbia Lines*—Concluded. | | | | | | |
| British Columbia | Kamloops—Lower Nicola—Princeton | 1899-07 | 232 | | 232 | 35 | |
| " | Kamloops-Vernon-Penticton-Kelowna | 1905-11 | 179½ | 1½ | 181 | 25 | |
| " | Kamloops-Mount Olie(North Thompson) | 1908-16 | 68 | | 68 | 13 | |
| " | Kamloops—Savona | 1913 | 26 | | 26 | 5 | |
| " | Kamloops—Barnhart Vale | 1911 | 14 | | 14 | 5 | |
| " | Shushwap—Notch Hill—Taft | 1914 | 168½ | 1½ | 170 | 21 | 57,050 |
| " | Fairview—Midway | 1914 | 56 | | 56 | 7 | |
| " | Whitemans Creek—Kelowna | 1914 | 30 | | 30 | 8 | |
| " | Nelson—Trail | 1914 | 61 | | 61 | 11 | |
| " | Proctor—Sidar | 1914 | 43¾ | 2¼ | 48 | 8 | |
| " | Nakusp—Edgewood | 1912 | 52 | 1 | 53 | 10 | |
| " | Golden—Windermere | 1901-01 | 89 | | 89 | 5 | |
| Yukon | Ashcroft—Dawson and Boundary | 1899-01 | 1,845 | | | 89 | |
| " | Hazelton—Port Simpson and Aberdeen | 1901-02 | 202½ | | | | |
| " | Tagish—Cariboo Crossing | 1901 | 18 | | 2,252½ | | |
| " | 150 Mile Station—Quesnelle Forks | 1902 | 64 | | | | |
| " | Ashcroft—Lillooet | 1896 | 62 | | | | |
| " | Quesnelle—Barkerville | 1887 | 61 | | | | |
| " | Ashcroft—Quesnelle (local wire) | 1878-87 | 215 | | 215 | | 114,521 |
| " | Hootalinqua—Livingstone Creek | 1907 | 35 | | 35 | 2 | |
| " | Aberdeen—Prince Rupert | 1907 | 40 | | 40 | 5 | |
| " | Kitsumkalum to Stewart | 1910-11 | 171 | | 171 | 7 | |
| " | 150 Mile House—Bella Coola | 1912 | 329 | | 329 | 17 | |
| " | Lillooet—Pioneer Mines | 1912 | 71 | | 71 | 6 | |
| " | Fraser Lake—Stewart Lake | 1912 | 40 | | 40 | 1 | |
| " | Lillooet—Lytton | 1913 | 47 | | 47 | 7 | |
| " | Ashcroft—Savonas | 1914 | 37 | | 37 | 2 | |
| " | Walhachin—Loop | 1914 | 3 | | 3 | 1 | |
| " | Queen Charlotte Island System | 1913-14 | 123 | | 123 | 5 | |
| | Total | | 11,183 | 314 | 11,497 | 870 | 377,849 |

# REPORT ON THE GOVERNMENT TELEGRAPH SERVICE, 1914-15.

### EXPLANATORY NOTES.

The tabular statement prefacing this report shows the total mileage, etc., of the telegraph lines operated by the Government. Lines that have been subsidized or constructed and transferred by the Government for operation by private companies are not included in this list.

The matter in the following pages comprises a statement of specific actions taken in the course of the year; and in pursuance of the plan followed last year the particulars are given in separate reports, hereto subjoined, from the district superintendents, and will be found indicated under the several divisional headings. In any case where no particular reference is made to a line found in the above-mentioned list, the understanding intended to be conveyed is that the line has been satisfactorily operated throughout the year, without any change of conditions since last made mention of in the annual report.

## NEWFOUNDLAND.

The line from Port au Basque to Cape Ray continued to be operated as heretofore under an arrangement with the Anglo-American Telegraph Company.

## MARITIME PROVINCES.

### CAPE BRETON.

The extension of the telephone line from Loch Ban to Inverness was completed, and a new telephone line was constructed from Brooks Village to Glendale a distance of 32 miles. General repairs were carried on throughout the system and the various lines placed in condition for efficient service. Five new telegraph offices and ten new telephone stations were opened. A report (No. 1) from the district superintendent, Mr. D. C. Dawson, is hereto appended.

### SEAL ISLAND, BAY OF FUNDY.

### CAPE NEGRO ISLAND, SHELBURNE COUNTY, N.S.

### HALF MOON ISLANDS, SHELBURNE COUNTY, N.S., INCLUDING CAPE BLANCHE LIFE-SAVING STATION.

In 1912-13, there were appropriations provided for the establishment of telephone connections between the above islands and the mainland; the one for Cape Negro island being in the interest of the residents generally, and the others in the interest of the life-saving stations pertaining to the Department of Marine, and sufficient lengths of submarine cable were imported for the purpose, but owing to the ss. *Tyrian* being continuously engaged after their arrival, the laying of them was deferred until the next year. In the meantime, arrangements were made with the local telephone companies whereby in consideration of a payment in each instance once and for all, they undertook to build and equip the requisite land line sections and to in due course put these connections into operation in conjunction with their respective systems. Government business in all three instances to be handled free of charge.

Under the foregoing conditions, the Barrington Township Telephone Company, for the Seal island connection, built and equipped 14 miles of line from Barrington to Prospect point and one-half mile of line on Seal island from the lighthouse to the cable landing on the east side. Total payment to the company, $250. And the Port

La Tour Telephone Company, for the Cape Negro island and Half Moon island connections, built and equipped 15 miles of line from the nearest point on their system to Cape Blanche, one mile at Cape Blanche for the Half Moon island connection, a branch of two miles to Point Purgatory for the Cape Negro island connection, and two miles on the island. Total payment to the company, $550.

The ss. *Tyrian* completed these connections by laying cables as hereunder:—

| | Knots of Cable. |
|---|---|
| May 16, 1914—Prospect point to near Seal island . . . .D.S. | 15·38 |
| Shore end at Seal island. . . . . " | ·26 |
| Total length (nautical miles). . . . . | 15·64 |
| May 18, 1914—Point Purgatory to Cape Negro island. .D.S. | 1·21 |
| Cape Blanche to Half Moon island. . . . " | 1·43 |
| Total length (nautical miles). . . . . | 2·64 |

BAY OF FUNDY.

There were few interruptions on this system during the year. Connection was made between Three islands and Little Wood island, 3¾ knots of cable being laid. Connection was also made between Duck island, Nantucket island and Grand Manan, 2¼ knots of cable being laid.

A report (No. 2) from the district superintendent, Mr. J. R. Parker, is hereto appended.

## PRINCE EDWARD ISLAND.

In consequence of some recurring interruptions of the Anglo-American Telegraph Company's submarine cable between Cape Traverse, P.E.I., and Cape Tormentine, N.B., notably in May and July, 1912, when for several days on each occasion recourse was had to the Marconi wireless stations at Cape Bear and Pictou for the maintenance of the telegraph service, there was an application received from the Prince Edward Island Government looking to the providing of a second cable to safeguard the communication with the mainland. At the same time, some improvement in the service itself for and on the island was moved for, which resulted in obtaining the co-operation of the Prince Edward Island Telephone Company whereby telegrams will be handled by them for the Anglo-American Telegraph Company at all points reached by the telephone company's system; and in addition to certain divisions of the tolls on business, defined in the respective agreements being entered into by the companies, the Telephone Company is being aided by the Government by providing a two-conductor cable between Wood island, P.E.I., and Point Caribou, N.S.; and in the way of further improvement, and provision for contingencies, the Government is providing a four-conductor cable between Cape Traverse and Cape Tormentine, two conductors being intended for the telegraph requirements and two in reserve for telephone service.

Tenders for these cables (14 knots of two conductors and 10 knots of four conductors) were invited on December 9, 1913, and on February 28, 1914, an order was placed with the Siemens Company of Canada, Limited, for delivery at Halifax by the 1st June for the price of $46,700. Provision for this outlay was made in the estimates for 1914-15, Vote, 151, $45,000, and Vote 557, $2,000. The cables were duly delivered, and have since been laid by the ss. *Tyrian;* the one between Wood island and Point Caribou on the 20th June, and the one between Cape Traverse and Cape Tormentine on the 4th July, 1914.

As these cables are of an exceptional character, as distinguished from the single core type generally in use with the Government telegraph system, the following details are noted for convenience of reference:—

Purchases—

| | |
|---|---|
| Fourteen knots with two conductors, each 216 pounds copper and 260 pounds gutta-percha. Total weight, 165 tons. Price delivered alongside receiving vessel at Halifax. | $24,600 |
| Ten knots with four conductors, two of 107 pounds copper and 150 pounds gutta-percha; two of 216 pounds copper and 260 pounds gutta-percha. Total weight, 120 tons. Price delivered alongside receiving vessel at Halifax.. | 22,100 |
| Total.. .. .. .. .. .. .. .. .. .. .. .. .. .. | $46,700 |

The electrical measurements of these cables were reported as follows:—

*Resistance Average at 75° F.*

Cores of 216/260 per knot: Insulator (1 min.), 1,186 megms. Conductor, 5·26 ohms., capacity, ·292 M.F.

Cores of 107/150 per knot: Insulator (1 min.), 1,844 megms. Conductor, 10·60 ohms., capacity, ·281 M.F.

(Capacity tests wire-to-wire, after laying, gave ·153 and ·144 M.F. per knot for the heavier and lighter cores respectively.)

Out of the above, ss. *Tyrian* laid—

| 1914. | Knots. |
|---|---|
| June 20, Wood island, P.E.I., to Point Caribou, N.S., two-conductor cable.. .. .. .. .. .. .. .. .. .. .. .. | 12·5 |
| July 4, Cape Traverse, P.E.I., to Cape Tormentine, N.B., four-conductor cable.. .. .. .. .. .. .. .. .. .. .. .. | 8·82 |

The surplus lengths are in tank aboard ss. *Tyrian* and available for repairs in event of requirement.

When the correspondence with the Maritime Telegraph and Telephone Company was in hand, prior to the ordering of these cables, the connection extended from Summerside, P.E.I. to North Sydney, C.B., and of course over shorter distances to Halifax, etc.

## QUEBEC.

### MAGDALEN ISLANDS CABLE REPAIRS.

The Grosse Isle-Byron island cable broken on April 4, was repaired by the ss. *Tyrian* on July 24.

The Amherst-Entry island cable was interrupted from April 25 to May 5, repairs being made by local lineman.

The Meat Cove-Old Harry cable, interrupted on May 24 was repaired by the ss. *Tyrian* on July 16 and failed again on December 24, repairs will be effected on opening of navigation.

### MAINTENANCE AND OPERATION.

A report (No. 3) from the district superintendent, Mr. A. LeBourdais, is hereto appended.

ANTICOSTI CABLE REPAIRS.

On November 17, the Long Point-Mechastic bay cable became interrupted and will be repaired on the opening of navigation.

MAINTENANCE AND OPERATION OF THE ANTICOSTI LAND LINE.

A report (No. 4) from the district superintendent, Mr. A. Malouin, is hereto appended.

NORTH SHORE OF ST. LAWRENCE AND CHICOUTIMI LINES.

Extensive repairs were performed on these lines under the foremanship of the general line repairers, and an increase in revenue is shown over the previous year. Mr. E. H. Tetu, who for many years held the position of district superintendent of the lines east of Bersimis, died on November 19 and was replaced by Mr. P. E. Vignault, formerly agent at Seven islands.

Report (No. 5) from E. Pope, superintendent at Quebec, is appended. This report also covers operations of the Quebec county telephone lines.

QUARANTINE TELEGRAPH AND ORLEANS ISLAND TELEPHONE SYSTEM.

*Cable Repairs.*—The two St. Francois-Ile aux Reaux cables broken by ice on December 13, 1913, were repaired in May, 1914.

The Grosse Isle-Crane island cable broken by ice on January 14, was repaired in May.

The Crane island-Montmagny cable was broken by ice on November 22, and will be repaired on the opening of navigation.

A report (No. 6) from Mr. J. P. Pouliot, district superintendent, is appended.

## ONTARIO.

The Pelee island telephone system was operated during 1914-15 under the same conditions as in previous years. A report (No. 7) from Mr. J. McR. Selkirk, district superintendent, Leamington, is appended hereto.

An amount of $4,800 was appropriated to connect Manitoulin and Cockburn island by cable and to construct a land line of 7½ miles on the former island to connect with the Manitoulin and North Shore telephone system. This work was completed on July 5 under the supervision of Mr. J. E. Gobeil, of the headquarters staff.

## NORTHWEST BRITISH COLUMBIA AND THE YUKON.

The separate reports (Nos. 8 to 11) appended hereto from the respective district superintendents, fully cover the work done on these divisions in the course of the fiscal year.

Under appropriations for 1914-15 there has been completed or in course of construction as stated in the reports of the district superintendents, a number of new lines and branches as follows:—

SASKATCHEWAN AND ALBERTA.

Lake Saskatoon to Hudson Hope.
Athabasca Landing to Lac La Biche.
North Battleford to Isle La Crosse.

BRITISH COLUMBIA.

Kamloops-Notch Hill-Sicamous.
Princeton-Copper Mountain.
Kelowna-Whiteman's Creek.
Fairview-Midway.
Nelson-Trail.
Proctor-Sirdar.
Alberni-Clayoquot-Nootka.
Ganges-Salt Spring.
Salt Spring-Sidney.

YUKON.

Ashcroft-Wallhachin-Savonas.
Queen Charlotte islands.

## TELEGRAPH SERVICE GENERALLY.

CABLESHIP "TYRIAN."

The following cables were repaired by the ss. *Tyrian* during the year, Old Harry-Meat Cove, St. Pauls island-Meat Cove, Little Bras d'Or, Big Bras d'Or, Grosse Isle-Bryon island, Long Point-Anticosti, Saguenay river, Deer island.

NEW CABLES LAID.

Caribou-Wood island, 12·50 knots; Cape Traverse-Cape Tormentine, 8·82 knots, Three islands-Little Wood island, 3·28 knots, Duck island, Nantucket island, 2·25 knots; Seal island-Prospect point, 15·38 knots; Cape Negro island-Purgatory point, 1·21 knots; Half Moon island, Blanche island, 1·43 knots.

A statement of the vessel's operations during the year is given in the accompanying report (No. 12) from Mr. A. B. McDonald, general inspector of the Maritime Provinces lines, and electrician of the ss. *Tyrian*

TELEGRAPH SYSTEMS OF THE DOMINION.

As a matter of general interest pursuant to the statement submitted last year, the latest figures to hand showing the extent of telegraph lines in operation in the Dominion are as given hereunder.

| Canada. | Length of Lines in Miles. | | | | Length of Conductors in Miles. | | | | No. of Offices |
|---|---|---|---|---|---|---|---|---|---|
| | Aerial. | Underground. | Submarine. | Total. | Aerial. | Underground. | Submarine. | Total. | |
| 1914-15. | | | | | | | | | |
| Great North Western Telegraph Co | 9,584 | 7 | 13 | 9,604 | 29,864 | 192 | 78 | 30,134 | |
| Canadian Pacific Telegraph | 13,824 | 18 | 103 | 13,945 | 102,857 | 1,201 | 251 | 104,309 | 1,532 |
| Western Union Telegraph Co | | | | | | | | | |
| Government Telegraph service | | | | | 11,183 | | 314 | 11,497 | 870 |
| Grand Trunk Pacific Telegraph | 10,859¾ | 1 | ¼ | 10,860 | | | | | 120 |

## REVENUE AND EXPENDITURE.

The revenue and expenditure for each of the Government lines in the several districts hereinbefore mentioned, are given in the following table:—

| 1914-15. | Expenditure. | Revenue. |
|---|---|---|
| | $ | $ |
| Lower St. Lawrence and Maritime Provinces— | | |
| Anticosti lines | 7,075 76 | 2,354 76 |
| Bay of Fundy | 2,193 47 | 1,087 75 |
| Cape Breton | 26,189 64 | 4,067 72 |
| Cape Ray (subsidy) | 250 00 | |
| Escuminac | 1,303 12 | 596 22 |
| Father Point Agency | 500 00 | |
| Ile aux Coudres (subsidy) | 200 00 | |
| Magdalen Islands | 5,639 02 | 1,620 12 |
| North Shore, east of Bersimis | 25,979 18 | 6,182 62 |
| North Shore, west of Bersimis | 21,177 85 | 1,181 31 |
| Orleans telephone | 1,305 73 | 387 64 |
| Quarantine system | 7,014 67 | 339 05 |
| Quebec County Lines | 2,347 39 | 448 66 |
| Prince Edward Island and Mainland | 6,946 66 | |
| Cable ship *Tyrian*— | | |
| Maintenance and repairs | 62,814 42 | |
| Generally— | | |
| Gulf and Maritime Provinces | 6,395 73 | |
| Timiskaming District— | | |
| Telephone line | 2,742 42 | 259 20 |
| Ontario— | | |
| Pelee Island telephone | 5,059 34 | 117 54 |
| North West Territories Lines | 89,934 40 | 30,980 27 |
| British Columbia— | | |
| Golden—Windermere | 3,469 11 | 2,274 80 |
| Vancouver Island | 74,573 90 | 22,209 73 |
| Nakusp—Edgewood | 1,160 95 | |
| Kamloops—Okanagan | 28,726 32 | 17,942 08 |
| British Columbia generally | 2,210 58 | |
| Yukon— | | |
| Ashcroft—Dawson | 240,196 66 | 133,894 80 |
| Telegraphic service generally | 7,268 65 | |
| Total | 632,674 98 | 225,944 27 |

## DEPARTMENTAL TELEPHONE SERVICE.

Up to the date of this report (April 1, 1915) the telephone connections with the central office of the Bell Telephone Company at Ottawa, listed as chargeable to the special appropriation, numbered 760, the annual charge for which amounts to $35,562.76. The connections are distributed amongst the several departments, as hereunder:—

| Department. | No. of Telephones. | | Total. | Cost per Annum. |
|---|---|---|---|---|
| | Offices. | Residences. | | |
| | | | | $ |
| Agriculture | 22 | 10 | 32 | 1,315 00 |
| Auditor General | 14 | 2 | 16 | 715 00 |
| Census | 1 | | 1 | 80 00 |
| Civil Service Commission | 4 | 3 | 7 | 342 00 |
| Clerk of Crown in Chancery | 2 | 1 | 3 | 125 00 |
| Commission on Cost of Living | 1 | | 1 | 40 00 |
| Customs | 19 | 6 | 25 | 1,020 00 |
| Conservation Commission | 5 | 1 | 6 | 375 00 |
| Dominion Archives | 2 | 1 | 3 | 135 00 |
| Dominion Police | 15 | 4 | 19 | 745 00 |
| Exchequer Court | 2 | 1 | 3 | 145 00 |
| External Affairs | 5 | 2 | 7 | 323 00 |
| Finance | 15 | 6 | 21 | 875 00 |
| Governor General | 8 | 3 | 11 | 1,523 76 |
| House of Commons | 18 | | 18 | 750 00 |
| Indian Affairs | 15 | 2 | 16 | 648 00 |
| Inland Revenue | 13 | 6 | 19 | 801 00 |
| Interior | 104 | 8 | 112 | 4,878 00 |
| Justice | 19 | 12 | 31 | 1,290 00 |
| Library of Parliament | 1 | 2 | 3 | 120 00 |
| Labour | 6 | 2 | 8 | 395 00 |
| Marine and Fisheries | 24 | 9 | 33 | 1,416 00 |
| Militia and Defence | 64 | 8 | 72 | 3,304 00 |
| Mines | 15 | 1 | 16 | 1,719 00 |
| Mounted Police | 5 | 1 | 6 | 235 00 |
| Naval Service | 21 | 5 | 26 | 1 076 00 |
| North West Territories | | 1 | 1 | 35 00 |
| Patriotic Fund Committee | 1 | | 1 | 55 00 |
| Post Office | 35 | 7 | 42 | 1,775 00 |
| Printing and Stationery | 10 | 7 | 17 | 1,713 00 |
| Privy Council | 7 | 4 | 11 | 460 00 |
| Public Works | 71 | 17 | 88 | 3,986 00 |
| Railways and Canals | 22 | 8 | 30 | 1,287 00 |
| Secretary of State | 11 | 5 | 16 | 663 00 |
| Senate | 10 | 4 | 14 | 568 00 |
| Supreme Court | 1 | | 1 | 35 00 |
| Trade and Commerce | 10 | 4 | 14 | 595 00 |
| | 607 | 153 | 760 | 35,562 76 |

## APPENDED TABLES.

The usual tabular statements of the lines and offices, staff, etc., of the telegraph service, following hereupon, will be found to contain whatever additions or changes have been made up to March 31, 1915.

D. H. KEELEY,

*General Superintendent.*

## GOVERNMENT TELEGRAPH SERVICE.

### NEWFOUNDLAND TELEGRAPH SERVICE.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Memo. |
|---|---|---|---|---|
| 1 | Port au Basque | 0 | $50 00 or commission | N.B.—The commission is 25 per cent upon all business to and from the office; said commission guaranteed not to be less than at the rate of $50 per annum. |
| 2 | Cape Ray Lighthouse | 14 | 50 00 " | |
| | Totals | 14 | 100 00 | |

N.B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line system of the Anglo-American Telegraph Company.

# GOVERNMENT TELEGRAPH SERVICE.

## ANTICOSTI TELEGRAPH SYSTEM.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 1 | Fox Bay | 0 | | | | Closed Aug. 5, 1909. |
| 2 | Heath Point | 2 | C. Hubert | 200 00 | Aug. 1, 1900 | For local agency. Cable removed. |
| 3 | South Point Lighthouse | 32½ | E. Leprise | 200 00 | July 1, 1903 | Increased to $200 Aug. 1, 1912. |
| 4 | Shallop Creek | 17½ | B. Bradley | 600 00 | July 7, 1881 | Increased to $600 Aug. 1, 1912. |
| 5 | Salt Lake | 52½ | Jos. Bourget, gen. repair. | 600 00 | July 17, 1906 | Increased to $600, Aug. 1, 1912. |
| | | | A. Boudreau, operator | 600 00 | May 26, 1913 | Plus $1 per day when on duty as general repair. |
| 6 | Southwest Pt. Lighthouse | 15 | A. Lemieux | 600 00 | July 1, 1901 | Increased to $600 Aug. 1, 1912. |
| | | | L. Lemieux | 300 00 | July 1, 1908 | Increased to $300 Aug. 1, 1912. |
| | Jupiter River | 7 | | | | |
| | Otter River | 17½ | | | | |
| | Beesie River | 22 | | | | |
| | Cape Eagle (Ellis Bay) | 10 | Jas. Duguay | 600 00 | June 20, 1906 | Increased eo $600 Aug. 1, 1914. |
| | West Point Lighthouse | 9 | A. Malouin, dist. supt. | 520 00 | Aug. 1, 1900 | Increased to $520 Aug. 1, 1912. |
| | | | A. Malouin, operator | 200 00 | Aug. 10, 1881 | Increased to $200 Aug. 1, 1912. |
| | | | Loz. Malouin, sub. opr. | 600 00 | | Increased to $600 Aug. 1. 1912. |
| 8 | English Bay | 3 | F. Cabot | 600 00 | July 1, 1882 | Increased to $600 Aug. 1, 1912. |
| | | | H. Malouin, gen. repairer | 600 00 | Sept. 10, 1909 | From Mechastic Bay to South West Point. Increased to $600 Aug. 1, 1912 |
| | Mechastic Bay (cable landing). | 14½ | | | | |
| | Total | 233⅓ | | 5,620 00 | | |

Southwest Point connects with L'Anse à Fougère, Gaspé, by cable 44½ knots; and from Mechastic Bay connection is made with Long Point of Mingan by cable 21 knots

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | L'Anse à Fouchère | | Thos. Dupuis | 17 00 | | Special allowance for the cable terminus. A testing station only. |
| 1 | Gaspé Basin | 28 | J. J. Annett | 660 00 | Oct. 16, 1881 | Transfer office. Connection with G.N.W. telegraph system. Increased to $660 Jan. 1. 1908. |
| | | 28 | | 677 00 | | |

## MAGDALEN ISLAND SYSTEM.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Amherst | 0 | Miss J. Shea | 62 00 or commission | Oct. | 1, 1882 | The Commission is 25 per cent on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum. |
| | To loop | 4½ | | | | | |
| 2 | Aurigny (on loop) | 2¼ | L. P. Gaudet | 50 00 " | | | |
| 3 | Amherst Lighthouse | 2 | | | | | |
| | To main line | 4½ | Wm. Cormier | 50 00 " | June | 11, 1881 | |
| | To cable | 2¼ | | | | | |
| | Cable stretch | 6⅓ | | | | | |
| 4 | Etang du Nord village | 1½ | J. G. Binet, gen. rep | 500 00 " | Dec. | 1, 1900 | Plus $1 per day when absent on duty. |
| | | | Mrs. A. Binet | 100 00 " | Dec. | 1, 1881 | |
| 5 | Etang du Nord Lighthouse (on loop) | 1½ | N. Arsenault | 50 00 " | Sept. | 1, 1901 | Two wire loop line. |
| | To main line | 1½ | | | | | |
| 6 | Grindstone | 7 | Wm. Reneau | 180 00 " | June | 9, 1908 | |
| 7 | Grindstone West | 1 | A. LeBourdais, dis. supt. | 900 00 " | Aug. | 17, 1880 | Plus $1 per day when absent on duty. The salary was $720 per annum prior to July 1, 1908. |
| | To cable (on loop) | ⅓ | | | | | |
| | Cable stretch (on loop) | ⅓ | J. J. LeBourdais | 700 00 " | May | 25, 1904 | Salary increased to $700, Nov. 1, 1913. |
| 8 | House Harbour (on loop) | 2¼ | Camille Delaney | 50 00 or commission | June | 1, 1888 | |
| 9 | Pointe Basse (on loop) | 3 | H. Arseneau | 50 00 " | Aug. | 1, 1902 | |
| 10 | South Beach (on loop) | 3 | | | | | |
| | To main line (wire) | 8½ | F. Chevrier | 50 00 " | July | 1, 1905 | |
| | To main cable | ⅓ | | | | | |
| | To loop | 2¼ | | | | | |
| 11 | Cap Verte (on loop) | ⅓ | J. Richard | 50 00 " | Oct. | 1, 1914 | |
| | To main line | ⅓ | | | | | |
| 12 | Wolfe Island | 12 | | | | | |
| 13 | Grosse Isle | 11¼ | N. Clarke | 420 00 and commission | June | 1, 1888 | For repeating station. Prior to Dec. 1, 1902, the allowance was $200 and commission for local agency. |
| | | | J. Quinn | 240 00 " | Dec. | 1, 1902 | |
| 14 | Old Harry | 9 | L. V. Clarke | 50 00 or " | Mar. | 8, 1907 | |
| 15 | Grand Entry | 5⅔ | Mrs. F. Atkins | 50 00 and " | Feb. | 18, 1882 | |
| | | | S. Clarke, repairer | 180 00 " | April | 1, 1912 | Plus $1.50 per day for labour and $1 per day horse hire when on line work |
| 16 | Grand Entry Point | | Wm. Larade | Commission 25 p.c | March | 4, 1913 | |
| 17 | Grande Ruisseau | | A. Arseneau | " " | | | |
| | CABLE CONNECTIONS. | | | | | | |
| | Grosse Isle | 0 | | | | | |
| | Old Harry (wire only) | 9 | (Cable landing) | | | | |
| | *Cable to Meat Cove*, Cape Breton | 55 | (See Meat Cove Line) | | | | |
| | Grosse Isle | 0 | | | | | |
| | *Cable to Bryon Island* | 11 | | | | | |
| 18 | Bryon Island | 1 | M. Dingwall | 150 00 or commission | Jan. | 1, 1903 | Two wire loop line from terminal hut for Grosse Isle cable. |
| 19 | Bryon Lighthouse | 3½ | P. Chevrier | 50 00 " | | | |
| | Amherst | 0 | | | | | |
| | *Cable to Entry Island* | 6¾ | | | | | |
| 20 | Entry Island Lighthouse | 2 | E. Chenell | 15 00 | | | |
| | Total | 182¼ | | 3,947 00 | | | |

Total mileage, Magdalen Islands system: Land wires, 101½; Cables, 80¼; Pole Line, 83¾.

6 GEORGE V, A. 1916

## GOVERNMENT TELEGRAPH

### NORTH SYDNEY—

| No. | Offices. | Intermediate Distances. | | | Agents and Operators. |
|---|---|---|---|---|---|
| | | Wire. | Embracing Pole Line. | Cables. | |
| | | Miles. | Miles. | Miles. | |
| 1 | Meat Cove* | 0 | | | Mrs. H. L. McEachern |
| 2 | Capsticks | 3 | | | M. J. Capsticks |
| | To loop | 4 | 7 | | |
| 3 | Bay St. Lawrence (loopwire) | ½ | | | J. R. McNeil |
| | | | | | N. McDonald |
| 4 | Aspy Bay | 4½ | 4½ | | R. C. Zwicker |
| | Cape North Island | 5 | 5 | | N. A. McDonald |
| | To loop | 1 | 1 | | |
| 6 | Dingwell (loopwire) | 5½ | | | Joe O'Brien |
| | To loop | 10 | 10 | | |
| 7 | Neils Harbour (loopwire) | 2½ | | | Arch. McLean |
| 8 | Ingonish | 9 | 9 | | J. E. McLeod |
| 9 | South Ingonish | 10½ | 10½ | | Mrs. M. C. Williams |
| 10 | Ingonish Ferry (¼ mile cable included) | 2 | 2 | ¼ | Mrs. W. A. McKinnon |
| 11 | Wreck Cove | 9 | 9 | | Miss Mary Morrison |
| 12 | French River | 5 | 5 | ¼ | John McDonald |
| 13 | Breton Cove | 2 | 2 | | D. B. McLeod |
| 14 | Indian Brook | 7 | 7 | | C. A. McInnes |
| | To loop | 2 | 2 | | |
| 15 | Murray (on loop) | 8 | | | |
| 16 | North River Bridge (on loop) | 2 | | | D. J. Morrison |
| | To main line | 10 | 10 | | |
| 17 | Englishtown (¼ mile cable included) | 3¾ | 3¾ | ¼ | J. D. McAskill |
| 18 | Eel Cove | 2 | 2 | | M. Smith |
| 19 | South Gut (on loop) | 3 | 3 | | Rachel Morrison |
| 20 | Baddeck (on loop) | 13 | | | D. Dunlop |
| | To Englishtown | 18 | 18 | | |
| 21 | Kellys Cove (New Campbellton) | 12 | 12 | | Miss A. Morrison |
| 22 | Big Bras d'Or (½ mile cable included) | 2 | 2 | ½ | D. Livingston |
| 23 | Little Bras d'Or (350 ft. cable included) | 8 | 8 | | M. Richards |

*Meat Cove station connects with the Magdalen Islands system by cable to Old Harry Head, 55 knots,

SESSIONAL PAPER No. 19

SERVICE—*Continued.*

MEAT COVE SECTION.

| Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|
| $ cts. | | |
| 50 00 or commission* .. | Sept. 1, 1897.. | *Where not otherwise stated the commission is 25 p.c. of the tolls for the Government line on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum. |
| 50 00 " .. | July 1, 1914.. | |
| 720 00 | Oct 1, 1914. | Cable station at Bay St. Lawrence in place of Meat Cove |
| 420 00 | July 28, 1914.. | since September 1, 1906. |
| ..... | ..... | |
| 50 00 or commission.... | May 1, 1913 | |
| 50 00 " . | " 13, 1904.. | |
| 50 00 " .... | Nov. 1, 1907 | |
| 50 00 " .. | Feb. 1, 1912.. | |
| 50 00 " .. | Jan. 1, 1913.. | |
| 50 00 " . .. | Jan. 11, 1910 . | Formerly in charge of Mr. Geo. Brewer, resigned. |
| 50 00 " .. . | Oct. 1, 1903 | |
| 50 00 " . | May 18, 1908. | |
| 50 00 " .. | April 1, 1899.. | |
| 25 p.c. commission .. | July 19, 1907. | |
| 50 00 or commission.... | June 1, 1913.. | |
| ..... | ..... | Closed during winter of 1909-10. |
| 50 00 or commission .. | Oct. 5, 1909 . | |
| 120 00 and commission and 25 p.c. R. & Cks. .. | Mar. 28, 1912.. | Mr. W. Bingham, deceased, Jan. 8, 1912. Switching point |
| 25 p.c. R. & Cks..... | Feb. 21, 1914.. | for Baddeck line. |
| 50 00 or commission... | Sept. 1, 1904.. | |
| 150 00 and 25 p.c. R.& Cks. | Oct. 11, 1913. | Former agent, L. M. Anderson. |
| ..... | ..... | This loop to Baddeck starts from and returns to English-town. |
| 50 00 or commission.... | Dec. 2, 1909.. | |
| 100 00 " .... | Jan. 1, 1889.. | Increase from $50 to $100 since November 1, 1904. |
| 50 00 " ... | Dec. 1, 1912.. | |
| 2,310 00 | | |

* Bay St. Lawrence with St. Paul's Island by a cable of 20 knots. The latter is operated with telephones.

6 GEORGE V, A. 1916

DOMINION TELEGRAPH

NORTH SYDNEY—

| No. | Offices. | Intermediate Distances. | | | Agents and Operators. |
|---|---|---|---|---|---|
| | | Wire. | Embracing Pole line. | Cable. | |
| | | Miles. | Miles. | Miles. | Brought forward.. |
| 24 | Meat Cove line—*Con.*<br>North Sydney | 4½ | 4½ | | W. U. Tel. Co |
| | Instructor | | | | Miss B. Bingham, Englishtown |
| | General Inspector | | | | A. B. McDonald, North Sydney |
| | District Superintendent for all lines in Cape Breton | | | | D. C. Dawson, St. John, N.B. |
| | Total | 168¾ | 137¼ | 1¼ | |
| | *Repairers' Sections.* | | | | |
| | General— | | | | |
| | Meat Cove—Big Bras d'Or | 162¾ | 125¾ | ½ | J. G. Dunlop, Baddeck |
| | Big Bras d'Or—North Sydney | 15 | 14½ | ½ | Jos. Logue, North Sydney |
| | Local— | | | | |
| | Meat Cove—Money Point and Aspy Bay | 20 | 19½ | | Pat. Capstick |
| | Aspy Bay—Neils Harbour | 24 | 16 | | M. McCaskell |
| | Neils Harbour—Ingonish Ferry | 21¾ | 21½ | ¼ | Rupert Curtis |
| | Ingonish Ferry—Englishtown | 29 | 28¾ | ¼ | N. M. McLeod |
| | Baddeck Loop Line | 36 | 18 | | D. McAuley |
| | Murray Loop Line | 20 | 10 | | J. Smith |
| | Englishtown—Big Bras d'Or | 14½ | 14 | ½ | H. Murdoch Campbell |
| | Big Bras d'Or—North Sydney | 12½ | 12½ | | Duncan McRae |
| | *Money Point Branch.* | | | | |
| 1 | Bay St. Lawrence | 0 | | | V. Therriault |
| 2 | Bay St. Lawrence Beach | 1½ | 1½ | | J. O'Brien |
| 3 | Cape North Light (Money Point) | 5½ | 5½ | | Norman McLeod |
| | Cape North Fog Alarm (Money Point) | 1 | 1 | | Stanley Hackett |
| | | 8 | 8 | | (Included in the mileage |
| | *St. Paul's Branch.* | | | | |
| | Bay St. Lawrence | 0 | | | |
| | St. Paul's Island (Inc. 20 Kts. cable) | 23 | 3 | 20 | J. Campbell |

SERVICE—*Continued.*

MEAT COVE SECTION—*Continued.*

| Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|
| $ cts. | | |
| 2,310 00 | | |
| Commission only..... | ..... | The commission is 50 p.c. on local business and 25 p.c. on through messages; and covers supervision of line and office accommodation at North Sydney. |
| 600 00 | Nov. 1, 1902. | Salary increased to $600, Aug. 1st., 1911. |
| 1,500 00 | May 9, 1905. | Increase to $1,500 from April 1st, 1909. Allowance of $300 per year in addition for office rent, etc. |
| 720 00 | Jan. 24, 1892. | Mr. McDonald accompanies the ss. *Tyrian* as electrician in connection with the cable-laying and repairing. |
| 5,130 00 | | Latest adjustment of allowance dates from July 1, 1907. The C. B. lines are operated in conjunction with the Western Union Telegraph. |
| 540 00 per annum. | Dec. 31, 1912. | Increased from $480, March 1st, 1911. |
| (See Eskasoni line, etc.). | ..... ..... | Horse hire allowed in addition since Dec. 1, 1909. |
| 80 00 per annum. | Dec. 31, 1912. | NOTE.—The rates of allowance are as adjusted in June, 1910. |
| 90 00 " .. | Prior to June 1910. | In reckoning the repair sections, loops (2 wire lines) are taken as equivalent to 50 p.c. additional pole line. Thus the Murray loop, 20 miles of wire and 10 miles of poles, |
| 90 00 " .. | Jan. 1, 1912 | is equivalent to 15 miles of pole lines. |
| 100 00 " .. | " | |
| 100 00 " .. | Prior to June 1910. | |
| 60 00 " .. | " | |
| 60 00 " .. | " | |
| 60 00 " .. | June 1, 1910. | |
| 1,180 00 | | |
| Accommodation. .... ..... | Dec. 10, 1907. | This line was established and is being operated by telephone in the interest of the Signal Service. |
| " ..... | " | |
| " ..... | June 1, 1909. | |
| of the Meat Cove, North Sydney section.) | | |
| 50 00..... | Oct. 1, 1890. | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued*

### NORTH SYDNEY—MEAT COVE SECTION—*Concluded.*

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| | *Repairers' Sections*—Con. | | | | | |
| | Baddeck Loop Line | | D. McAuley | 100 00 per annum | Prior to June, 1910 | |
| | Murray Loop Line | | Philip McLean | 60 00 " | Sept. 15, 1913 | |
| | Englishtown — Big Bras d'Or | | Murdoch Campbell | 60 00 " | Prior to June, 1910 | |
| | Big Bras d'Or — North Sydney | | Duncan McRae | 60 00 " | June 1, 1910 | |
| | | | | 280 00 | | |
| | *Money Point Branch.* | | | | | |
| 1 | Bay St. Lawrence | | V. Therriault | Accommodation | Dec. 10, 1907 | This line was established and is being operated by telephone in the interest of the Signal Service. |
| 2 | Bay St. Lawrence Beach | | J. O'Brien | " | Dec. 10, 1907 | |
| 3 | Cape North Light (Money Point) | | Norman McLeod | " | Dec. 10, 1907 | |
| 4 | Cape North Fog Alarm (Money Point) | | Stanley Hackett | " | June 1, 1909 | |
| | Total | | | | | |

### CAPE BRETON : NORTH SYDNEY, BOULARDERIE AND ESKASONI SECTIONS.

| | | | | | | |
|---|---|---|---|---|---|---|
| | *Boularderie Line.* | | | | | |
| | *North Sydney.* | | | | | |
| | LittleBrasd'Or(M.C.pol's) | 4½ | (See Meat Cove Line) | | | |
| 1 | Alder Point (loop line) | 5 | Miss M. Plant | 50 00 or commission | Nov. 18, 1912 | The commission is 50 p.c. of the Govt. line tolls in each instance and is guaranteed to amount to not less than $50 per annum. |
| 2 | Groves Point (1 mi. M.C. poles) | 3 | Rod Campbell | 50 00 " | Dec. 18, 1912 | |
| 3 | Hillside | 4 | Mrs. Annabelle McKenzie | 50 00 " | Feb. 1, 1907 | |
| 4 | Boularderie West | 4 | M. R. McIntyre | 50 00 " | Jan. 1, 1907 | |
| | | | | " | | |
| | | 20½ | | 200 00 " | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | S. S. Boularderie | 3 | Donald McRae | 50 00 | " | Jan. 1, 1907 | |
| 6 | Pointe Clear | 4 | Mrs. M. McLeod | 50 00 | " | Dec 1, 1906 | |
| 7 | Upper Kempt Head | 7 | Mrs. Murdock McKenzie | 50 00 | " | Oct. 6, 1904 | |
| 8 | Ross Ferry | 6½ | Mrs. J. F. McKenzie | 50 00 | " | Oct. 1, 1911 | |
| 9 | Boularderie Centre | 6 | Mrs. J. B. McKenzie | 50 00 | " | Oct. 6, 1904 | |
| | Big Bras d'Or | 7½ | (See Meat Cove line) | | | | |
| | Total miles wire | 54½ | Pole line 51. | 450 00 | | | |
| | *Repairers' Sections.* | | | | | | |
| | Alder Point—Little Bras d'Or | 5 | John T. Tobin | 50 00 | " | Oct. 1, 1912 | |
| | Big Bras d'Or — Upper Kempt Head | 20 | J. A. C. McKenzie | 50 00 | " | Jan. 1, 1907 | |
| | Little Bras d'Or — Upper Kempt Head | 24 | M. McLeod | 50 00 | " | July 12, 1909 | |
| | On Meat Cove poles | 7½ | | | | | |
| | General repairer | | Jos. Logue | (See below) | | | |
| | Total | 54½ | | 150 00 | | | |
| | *Eskasoni Line.* | | | | | | |
| | North Sydney | | | | | | |
| 1 | French Vale (5¾ on Gabarus poles) | 11 | Katie McLean | 50 00 or commission | | Mar. 25, 1907 | The commission is 25 p.c. of the Govt. line tolls in each instance and is guaranteed to amount to not less than $50 per annum. |
| 2 | Gillis Lake | 5 | Peter McLean | 50 00 | " | July. 13, 1913 | |
| 3 | East Bay | 4 | Miss M. L. McNeil | 50 00 | " | Aug. 1, 1913, re-opened. | |
| 4 | North Side, East Bay | 6 | James J. Gillis | 50 00 | " | Jan. 15, 1907 | |
| 5 | Eskasoni | 5 | Mrs V. McMillan | 50 00 | " | Dec. 6, 1907 | |
| 6 | Castle Bay | 6 | Miss C. McInnis | 50 00 | " | Aug. 18, 1912 | |
| 7 | Benacadie Pond | 5 | J. N. McNeil | 50 00 | " | Mar. 20, 1909 | |
| | Benacadie | 5 | Hugh Farrell | 50 00 | " | Mar. 20, 1909 | |
| 8 | Pipers's Cove | 2 | Katie McNeil | 50 00 | " | Mar. 20, 1909 | |
| 9 | Grand Narrows | 4 | J. J. McNeil | 50 00 | " | May , 1910 | Previously in charge of Daniel McNeil. |
| | Total miles of wire | 53 | Pole line 47¾. | 500 00 | | | |
| | *Repairers' Sections.* | | | | | | |
| | On Meat Cove poles | 5¾ | A. G. McLean, McLeanville. | 50 00 per annum | | June 1, 1907 | |
| | From Meat Cove Line to Gillis Lake | 10¾ | | | | | |
| | From Gillis Lake to Eskasoni (Castle Bay) | 21 | Duncan Gillis, North Side, East Bay | 50 00 | " | June 1, 1907 | |
| | | 37 | | 100 00 | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CAPE BRETON—NORTH SYDNEY, BOULARDERIE AND ESKASONI SECTIONS—*Continued.*

| No. | Stations. | Inter-mediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | *Repairers' Sections*—Con. | Miles. | | 8 cts. | | |
| | From Castle Bay to Grand Narrows ... ..... | 16 | J. L. McDonald, Grand Narrows..... ... | 50 00 per annum..... | June 10, 1909..... | |
| | Total... ..... | 53 | | 150 00 | | |
| | *General Repairer.* | | | | | |
| | Boularderie line..... | 54½ | Jos. Logue, North Sydney..... | 540 00 per annum ... | Jan. 1, 1906..... | Horse hire allowed in addition. |
| | Eskasoni line. ..... | 53 | | | | |
| | Gabarus line, North Sydney—Leitche's Creek.. | 5⅜ | | | | |
| | Meat Cove line: North Sydney—Big Bras d'Or | 15 | | | | |
| | Total . . ..... | 128¼ | | | | |

### BAY ST. LAWRENCE—HAWKESBURY SECTION.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Bay St. Lawrence..... | 0 | (See North Sydney line). | | | |
| 1 | Meat Cove (2nd wire).... | 7¾ | " " | | | |
| 2 | Cape St. Lawrence..... | 4 | | | | |
| | Half way..... | 1½ | Mrs. C. Jamieson..... | 50 00 or commission... | Jan. 1, 1904..... | The commission is 25 p. c. on all business to and from the office in each instance: said commission guaranteed to be not less than at the rate of $50 per annum. |
| | Poulets Cove..... | 5½ | | | | |
| 3 | Pleasant Bay..... | 8 | Mrs. G. P. McIntosh.. | 50 00 " ... | Sept. 1, 1907..... | |
| | Barren..... ..... | 10 | | | | |
| 4 | Cheticamp (Eastern Harbour) ..... .. ...., | 10 | M. S. Ancoin.... .... ..... ... ... ... | | April 30, 1912..... | 50 p. c. Receipts and cheques without guarantee. |
| 5 | Grand Etang .. ..... | 8 | ..... ..... ..... | ..... ..... ..... | ..... | Closed in March, 1905. |
| 6 | Margaree Harbour .... | 8 | A. B. C. McLean..... | 120 00 without com'n.. | Oct. 20, 1896..... | Allowance 50 p. c. Receipts and cheques government line prior to May, 1910. |
| 7 | Margaree Forks..... | 8 | Sarah McDougall.... .. | 50 00 or commission.. | Sept. 10, 1908..... | |
| 8 | N.E Margaree(loop wire) | 10 | Mrs. J. D. Ross..... | 50 00 " .. | Feb. 1, 1898..... | |
| | | 80¾ | | 320 00 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9 | S. W. Margaree | 4 | Mrs. M. Collins | 50 00 | with com'n. | Jan. | 1, 1912 | |
| | To loop | 12 | | | | | | |
| 10 | Inverness (loop wire) | 8 | Mrs. G. F. McLean | 360 00 | without com'n. | April | 1, 1912 | Plus $12 per annum for battery care. |
| 11 | Strathlorne (Willow B'nk) | 3 | Miss Rosa McLean | 180 00 | and commission | Nov. | 1, 1908 | |
| 12 | Mabou | 9 | Mrs. M. McDonald | 120 00 | without com'n. | April | 1, 1887 | |
| 13 | Port Hood | 10 | D. J. McDonald | 50 00 | or commission | July | 1, 1903 | |
| 14 | Smith's Id. (on loop) 1 mi. cable included | 3¼ | Miss E. L. Smith | 50 00 | " | Nov. | 1, 1907 | |
| 15 | Henry Id. (on loop) 1½ miles cable included | 3½ | Miss C. McLennan | 50 00 | " | Nov. | 8, 1907 | |
| | To Port Hood, 2½ miles cable included | 6¾ | | | | | | |
| 16 | Judique | 10 | Miss M. C. McDonald | 50 00 | " | Jan. | 1, 1912 | |
| 17 | Craignish (Craigmore) | 8 | Allan Cameron | 50 00 | " | Nov. | 1, 1903 | |
| 18 | Port Hastings | 10 | Mrs. A. Petrie | 50 00 | " | Aug. | 2, 1912 | |
| 19 | Hawkesbury | 3¾ | Miss E. McDonald | 240 00 | without com'n. | Nov. | 1, 1903 | |
| | Total | 171½ | | 1,570 00 | | | | |

Miles of wire, 166½; miles of cable, 5; miles of pole line, 146.

*Wycocomagh Branch Line*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Strathlorne (Willow B'nk) | 0 | J. B. McCormick | 50 00 | or commission | Mar. | 4, 1910 | Repeating office, $15 per month, plus $1 per month for battery care from May 1, 1910 (C. 972). |
| 1 | McCormick | 2½ | | | | | | |
| | To loop | 6 | | | | | | |
| 2 | Hays River Loop | 1½ | H. R. Beaton | 50 00 | " | July | 8, 1912 | |
| 3 | West Side Lake | 2¾ | P. M. McInnes | 50 00 | " | Mar. | 4, 1910 | |
| | To main line | 2¾ | | | | | | |
| 4 | Brook Village | 6 | Miss Stella Jamieson | 50 00 | " | April | 26, 1912 | |
| 5 | Skye Glen | 4 | Mrs. J. A. Austin | 25 00 | " | Opened Sept. 12, 1913 | | |
| | Wycocomagh | 8½ | Angus McLeod | 50 00 | " | Jan. | 31, 1911 | |
| | Total miles of wire | 33½ | Pole line, 29½ | 250 00 | | | | |

*Repairers' Sections.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| General— | | | | | | | |
| Meat Cove—Inverness | 104½ | P. A. Doyle, Inverness | 480 00 | per annum | Feb. | 1, 1912 | Horse hire allowed in addition to salary. |
| Inverness-Hawkesbury | 67¼ | J. F. McMillan, Port Hastings | 480 00 | " | May | 17, 1910 | Prior to March 1, 1911. Salary $35 per month. |
| Wycocomagh Line | 32¼ | | | | | | |
| Local— | | | | | | | |
| Bay St. Lawrence—Meat Cove | 7¼ | (See North Sydney Line) | | | | | |
| Meat Cove—Half-Way Shanty | 5½ | R. Fraser | 40 00 | " | May | 20, 1903 | |
| Half-Way Shanty—Poulets Cove | | A. Fraser | 30 00 | " | Sept. | 1, 1912 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### BAY ST. LAWRENCE—HAWKESBURY SECTION—*Continued.*

| No. | Stations. | Intermediate distance | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | *Repairers' Section*—Con. | Miles. | | $ cts. | | |
| | Poulets Cove—Pleasant Bay | 8 | K. Fraser | 40 00 per annum | May 20, 1903 | |
| | Pleasant Bay—Barren | 10 | E. J. Timmens | 40 00 " | Mar. 16, 1901 | |
| | Barren—Cheticamp | 10 | L. A. Poirier | 80 00 " | May 15, 1912 | Mr. J. A. Chaisson, former repairer, resigned on February 15, 1912. |
| | Cheticamp—Grand Etang | 8 | M. A. Boudreau | 40 00 " | Apr. 15, 1913 | |
| | Grand Etang—Margaree II | 8 | H. K. McLean | 25 00 " | July 1, 1905 | |
| | Margaree II.—S. W. Margaree and N. E. Margaree loop | 22 | J. J. Miller | 50 00 " | Mar. 16, 1912 | Mr. A. McFarlane, deceased, January 31, 1912. |
| | S. W. Margaree—Strathlorne | 23 | J. D. McFarlane | 40 00 " | June 4, 1902 | |
| | Strathlorne—Mabou | 9 | L. G. McDougall | 40 00 " | Nov. 3, 1902 | |
| | Mabou and Judique | 20 | Angus J. McDonald | 50 00 " | Sept. 1, 1912 | |
| | Judique and Port Hawkesbury | 21¾ | J. N. McIsaac | 50 00 " | Aug. 1, 1904 | |
| | Pt. Hood Islands | 13½ | Ambroise Smith | 20 00 " | Aug. 1, 1908 | Of this section (see list) 5 miles is submarine cable; the land line portions covering but 4½ miles of 2-wire line for the loop. |
| | Total | 171½ | | 1,505 00 | | |

### CAPE BRETON—HAWKESBURY—SCATARIE ISLAND SECTION.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Hawkesbury | 0 | (See Bay St. Lawrence line) | | | |
| 1 | River Bourgeois | 26 | K. F. Fougere | 50 00 or commission | August. 30, 1913. | The commission is 25 p.c. of the Government line tolls, and is guaranteed to amount to not less than $50 per annum. Where 50 p. c. commission is paid there is no guarantee as to amount. |
| 2 | St. Peters | 6 | Miss C. McKenzie | 100 00 " | June 30, 1912 | Main battery at St. Peters. |
| 3 | Rockdale | 4 | F. W. Lafford | Commission (25% only) | April 26, 1913 | |
| | To loop | 2¾ | | | | |
| 4 | LowerLardoise(loop wire) | ½ | Mrs. E. Finlayson | 50 00 or commission | May 11, 1910 | |
| 5 | Grand River | 7 | Miss E. A. Finlayson | 120 00 and " | June 1, 1903 | Repeating office. Allowance $50 and commission prior to April 1, 1912. |
| 6 | L'Archevêque | 6 | W. Kempt | 50 00 " | June 1, 1912 | |
| 7 | St. Esprit (Laframboise intervale) | 7 | Mrs. J. D. Morrison | 50 00 " | Sept. 1, 1906 | |
| | | 59¼ | | 420 00 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Fourchie (Fourchu) | 13 | Mary C. McLean | 50 00 or commission. | Nov. | 1, 1913 | |
| | To loop | 16 | | | | | |
| 9 | Gabarus (loop wire) | 3 | Miss. C. Grant | 360 without " | Jan. | 16, 1901 | Repeating office. Automatic repeaters for North Sydney line. $3 per month in winter for attending fire. Rent allowance $75 per annum. |
| 0 | Louisburg | 11 | Wesley Townsend. | 50 00 or " | Feb. | 1, 1904 | |
| 11 | Big Lorraine | 3 | M. P. Dowd | Accommodation office. | Jan. | 15, 1913 | |
| 12 | Little Lorraine | 4 | John Gallant | 25% commission. | June | 1, 1912 | |
| 13 | Baleine | 2 | Henry Leahy | 25% " | July | 1, 1913 | |
| 14 | Main à Dieu | 4 | Mrs. Jas. McDougall | 25% " | Feb. | 4, 1912 | Main battery at Main-à-Dieu. |
| | To Landing | 1 | | | | | |
| 15 | Scatarie Island W. Cable | 3½ | E. E. Pope | 50 00 or " | Aug. | 15, 1904 | |
| 16 | Scatarie Island East | 7¼ | Miss. T. Nearing | 50 00 " | May | 20, 1912 | $8 per annum for care of main battery. |
| | Total | 127 | | 980 00 | | | |

Miles of wire, 123½; miles of cable, 3½; miles of pole line, 121¾.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | *Grand River — Gabarus Line.* | | | | | | |
| | Grand River | 0 | (See Hawkesbury line). | | | | |
| | To loop | 7 | | | | | |
| 1 | Grand River Falls (loop wire) | 3 | Mrs. E. D. McKillop | 50 00 or commission | Dec. | 20, 1907 | |
| | Loch Lomond | 5½ | F. McDonald | 50 00 " | Feb. | 7, 1913 | |
| | Enon | 4 | A. D. Morrison | 50 00 " | Mar. | 21, 1912 | |
| | Salmon River | 16 | | | | | |
| | Victoria Bridge | 8 | Mrs. A. McKinnon | 50 00 " | | | |
| 4 | Gabarus (North Sydney line poles, 2½ miles) | 5 | (See Hawkesbury line) | | | | |
| | Total | 48½ | Pole line, 44½ | 200 00 | | | |
| | *N. Sydney—Gabarus Line* | | | | | | |
| | North Sydney | 0 | (See Meat Cove line) | | | | This line between North Sydney and Gabarus, without any intermediate offices prior to June, 1910, has been in operation since December 11, 1903. |
| 1 | Leitches Creek | 3½ | J. D. McCormack | 50 00 or commission. | Feb. | 28, 1913 | |
| 2 | Ball's Creek | 5½ | D. A. McCormick | Commission 25% only | June | 1, 1910 | |
| 3 | Marion Bridge | 17½ | Austin Morrison | 50 00 or commission | Aug. | 2, 1912 | |
| 4 | Gabarus (Hawkesbury Pole line, 3 miles) | 12 | (See Hawkesbury line) | | | | |
| | Total | 38½ | Pole line, 35½ | 100 00 | | | |
| | *Repairers' Sections.* | | | | | | |
| | Local— | | | | | | |
| | Grand River to Enon | 19½ | H. Urquhart, Grand River | 50 00 per annum | June | 10 1909 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CAPE BRETON—HAWKESBURY—SCATARIE ISLAND SECTION—*Concluded.*

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | *Repairer's Sections*—Con. | Miles. | | $ cts. | | |
| | Grand River to Fourchu. | 26 | D. McKillop, Grand River. | 50 00 per annum | June 10, 1909 | |
| | General— | | | | | |
| | Hawkesbury to Gabarus. | 89¾ | M. McRae, St. Peters | 480 00 " | Feb. 1, 1912 | Horse hire allowed in addition since December 1, 1909. Salary $35 per m. prior to Mar. 1, 1911. |
| | Gabarus to Leitches Cr'k | 33 | | | | |
| | Gabarus to Scatarie Id. E | 33½ | D. S. Hooper, Louisburg | 540 00 " | July 21, 1912 | Horse hire allowed in addition. |
| | Gabarus to Enon. | 29 | | | | |
| | | | | 1,120 00 | | |
| | BADDECK—NYANZA—BIG INTERVALE SECTION. | | | | | |
| | Baddeck | 0 | D. Dunlop | 50 00 per annum | | |
| | Nyanza | 6½ | Mrs. M. McRae | 25% Comm | Sept. 2, 1914 | |
| | West Middle River | 5 | Thos. McRae | " " | " " | |
| | Upper Middle River | 6 | D. McLennan | " " | " " | |
| | N.E. Margaree | 12 | Mrs. D. J. Ross | " " | | |
| | Big Intervale | 10 | R. McKenzie | " " | Nov. 1913 | |
| | | 39½ | | | | |
| | SOUTH WEST MARGAREE—WHYCOCOMAGH—LITTLE NARROWS SECTION. | | | | | |
| | S. W. Margaree | 0 | | | | |
| | East Lake Ainslie | 11 | D. McKinnon | 25% Comm | Nov. 1913 | |
| | South " | 12 | J. R. McMillan | " " | " " | |
| | Stewartdale | 4 | D. H. McDonald | " " | " " | |
| | Whycocomagh | 3 | | | | |
| | Little Narrows | | | | | |
| | North Side | 8½ | D. B. McKay | " " | Sept. 8, 1913 | |
| | | 38½ | | | | |

## BADDECK—LITTLE NARROWS—WASHABUCK CENTRE.

| | | | | |
|---|---|---|---|---|
| Baddeck | 0 | | | |
| Little Narrows North Side | 12½ | J. J. Gillies | 25% Comm | |
| Little Narraws South Side | 7 | D. B. McKay | " " | Sept. 10, 1914 |
| Washabuck Bridge | 6 | J. D. McRitchie | " " | " " " |
| Washabuck Centre | 6 | Alec McNiel | " " | " 14, " |
| | 31½ | | | |

## SHATHLORNE—SCOTTSVILLE CENTRE.

| | | | | |
|---|---|---|---|---|
| Strathlorne | 0 | | | |
| Loch Ban | 4 | J. B. McCormik | 25% Comm. guar | |
| North Lake Ainslie | 2 | J. J. Dunbar | " " | Nov. 1913 |
| Scottsville | 5 | L. E. McKay | " " | " " |
| | 11 | | | |

## WHYCOCOMAGH—ORANGEDALE SECTION.

| | | | | |
|---|---|---|---|---|
| Whycocomagh | 0 | | | |
| Orangedale | 7 | A. McLeod | 25% Comm. guar | |

## GRAND NARROWS—SHENACADIE—BEAVER COVE SECTION.

| | | | | |
|---|---|---|---|---|
| Grand Narrows | 0 | H. D. McNeil | 25% Comm | Jan 28, 1915 |
| Christmas Island | 1½ | S. T. McNeil | " " | Sept. 11, 1914 |
| Shenacadie | 7 | N. J. McKinnon | " " | " 1914 |
| Beaver Cove | 7 | D. McNeil | " " | " " |
| | 15½ | | | |

## BROOK VILLAGE—GLENDALE SECTION.

| | | | | |
|---|---|---|---|---|
| Brook Village | 0 | E. Jamieson | 25% Comm | |
| Glendale | 32 | | | |
| | 32 | | | |

CHATHAM-ESCUMINAC, N. B., TELEPHONE SYSTEM.

| No. | Stations. | Intermediate distance. | Agents. | Allowance. | Date of appointment. |
|---|---|---|---|---|---|
| | | Miles. | | | |
| 1 | Chatham | ..... | Miss J. Sivewright | $ 50 per annum | April 1, 1914. |
| | | ..... | M. Ramsay, repairer | 600 " | Aug. 25, 1913. |
| 2 | Lower Nappan | 8¾ | Wallace Campbell | 25 p.c. receipts | Nov. 1, 1913. |
| 3 | Point au Carr | 5 | E. H. Russel | 25 " " | " 1, 1913. |
| 4 | Victoria | 3 | Jas. MacDonald | 25 " " | " 1, 1913. |
| 5 | Hexham | 2 | M. J. Macdougall | $ 50 per annum | July 1, 1904. |
| 6 | Bayside | 3 | Jos. Williston | 25 p.c. receipts | Nov. 1, 1913. |
| 7 | Bay du Vin | 2 | S. B. Williston | 25 " " | " 1, 1913. |
| 8 | Hardwicke | 7 | M. Bremner | $ 50 per annum | Aug. 1, 1891. |
| 9 | Eel River | 2 | Valentine Gibbs | 25 p.c. receipts | Nov. 1, 1913. |
| 10 | Bay St. Anne | 2 | S. J. & H. Lavoie | 25 " " | " 1, 1913. |
| 11 | Escuminac | 3 | D. Lewis | $ 50 per annum | Sept. 1, 1885. |
| 12 | Point Escuminac | 5 | K. R. McLennan | $ 50 per annum | Nov. 1, 1893. |
| 13 | Point Sapin | 9 | W. S. Loggie & Co. | 25 p.c. receipts | " 1, 1913. |
| 14 | Point Sapin | 1 | M. Lavoie | 25 " " | " 1, 1913. |
| | Total | 52¼ | | $200 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### NOVA SCOTIA TELEGRAPH SYSTEM.

#### Cape Sable Section.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| 1 | Barrington | 0 | | | | This line has been leased to the Barrington Telephone Company from August 12, 1897. The lease is terminable at any time. |
| 2 | Newelton (including 1½ knots cable) | 11 | | | | |
| 3 | Cape Sable Island light house (including ¼ mile cable) | 6¾ | | | | |
| | | 17¾ | | | | |

#### East Coast Section.

N. B.—In connection with the Signal Service, a land line, 208 miles in length, was erected in 1881, between Canso and Halifax, for a bonus of $16,000, and is maintained and operated by the Western Union Telegraph Company, without further cost to the Government.

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### BAY OF FUNDY, N.B.

GRAND MANAN AND CAMPOBELLO ISLANDS.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | Grand Manan— | | | $ cts. | | |
| 1 | Long Eddy Cable Hut to Flaggs Cove | 3 | J. R. Parker | 540 00 | May 14, 1912 | |
| | " | | A. Gilmore | 60 00 | Dec. 1, 1894. | |
| 2 | Castalia | 2½ | Geo. E. Dalzell | 25 p.c. commission | June 1, 1898 | The commission of 25 p. c. on all Government line business to and from the office and commission guaranteed not to be less than at the rate of $50 per annum. When 50 p. c. commission is paid there is no guarantee as to amount. |
| 3 | Woodwards Cove | 3½ | W. A. Fraser | 50 " " | Feb. 28, 1893. | |
| 4 | Grand Harbour | 2 | L. Newton | 75 00 or commission. | April 1, 1887 | |
| 5 | Seal Cove | 4½ | J. A. Ingersoll | 75 00 " | Sept 22, 1899. | |
| 6 | " | ¼ | Mrs. Robert Fraser | 25 00 " | Jan. 1, 1906. | |
| 7 | Deep Cove | 2 | G. Dalzell | 25 p. c. " | June, 1913. | |
| 8 | Southern Head | 3¼ | T. Foster | 25 " " | Dec. 1, 1910 | |
| | *Branch Lines.* | | | | | |
| | Grand Harbour— | | | | | |
| 9 | Cheney's Island, ½ knot cable | 4¾ | S. E. Russell | 25 " " | Feb 1, 1891. | |
| 10 | White Head Island, ¾ knot cable | 1½ | Mrs. H. Leary | 50 00 " | July 1, 1910. | |
| | Woodwards Cove to | | | | | |
| 11 | Nantucket, ½ knot cable | 3¼ | J. Moses | 25 p.c " | May 1, 1914. | |
| 12 | Duck Island, 1¼ knot cable | | M. L. Daggett | 25 " " | May 1, 1914. | |
| | Cable, Long Eddy to Herring Cove, Campobello | 10 | E. G. Mitchell | 210 00 and " | May 1, 1905. | Rent $60 per annum. Fuel, about $30. |
| 13 | Herring Cove Cable Hut to Welchpool | 4¾ | W. Parker, repairer | $2 00 per day | | |
| | Cable across Channel to Eastport | 1¾ | | | | |
| 14 | Eastport, Me., U.S.A. | ½ | Miss. M. E. Hurley | 200 00 per annum | June 30, 1913. | |
| | Total | 47½ | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Gannet Rock Line—Seal Cove to— | | | | | |
| 15 | Wood Island | 1½ | P. Green | 25 p.c. commission | Nov. 7, 1910. | This line is operated in interests of Marine and Fisheries Department. |
| 16 | Little Wood Island, ½ knot Cable | 2¼ | H. Harvey | Accommodation | May 1914 | |
| 17 | Three Sister Island, 2¼ knot Cable | 3½ | M. Foster | 25 p.c. commission | May 1914 | |
| 18 | Gannet Rock | 7¼ | Agent of M. & F. | | Nov. 1910 | |
| 19 | Partridge Island, Fort Dufferin, ⅞ knot Cable | | | | 1900 | |
| | Partridge Island, Fort Dufferin, ⅞ knot cable | | | | 1910 | |
| | Total | 14¾ | | | | |

## CHICOUTIMI AND NORTH OF ST. LAWRENCE TELEGRAPH SYSTEM.

### Chicoutimi—Tadoussac Section.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Chicoutimi | 0 | J. D. Villeneuve, insp. | 780 00 | April 1, 1906 | |
| | | | T. Villeneuve, operator | 660 00 | " 1, 1907 | |
| | | | S. Lavoie | 540 00 | Nov. 1, 1914 | |
| | | | A. Blais, messenger | 120 00 | " 1, 1912 | |
| | | | M. Desbiens, cleaner | 72 00 | Aug. 1, 1906 | |
| | | | J. Fortin, repairer | 426 00 | June 1, 1914 | |
| 2 | Ste. Anne | 2½ | Miss A. Gauthier, op'r. | 50 00 | Feb. 1, 1909 | |
| | | | P. Gauthier, repairer | 350 00 | " 1, 1904 | |
| 3 | St. Fulgence | 8 | E. L. J. Tremblay | 50 00 | Jan. 1, 1904 | |
| 4 | Lac Laurent | 8 | S. Gagnon, operator | 50 00 | April 1, 1906 | |
| | | | J. Brisson, repairer | 360 00 | June 1, 1906 | |
| 5 | Descente des Femmes | 9 | Aug. Villeneuve, op'r. | 50 00 | April 1, 1906 | |
| 6 | Ste. Marguerite Depot | 34 | E. Simard, operator | 50 00 | Aug. 1, 1909 | |
| 7 | Ste. Marguerite | 2 | Alex. Savard, op'r. | 50 00 | Mar. 15, 1912 | |
| 8 | Sacré Cœur | 8 | Miss L. Maltais, op'r. | 50 00 | April 1, 1906 | |
| | | | H. Gravel, repairer | 360 00 | " 1, 1906 | |
| 9 | Tadoussac West | 11½ | J. Desnoyles, agent | 25 p.c. commission | " 18, 1907 | |
| 10 | Tadoussac | 1 | Eugène Caron, agent | | | See North Shore line. |
| | | 84 | | 4,012 00 | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CHICOUTIMI—PERIBONKA SECTION.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 1 | Chicoutimi | 0 | (See above.) | | | |
| 2 | Ste. Anne | 2½ | " " | | | |
| | To loop | 5½ | | | | |
| 3 | Shipshaw North, loop wire | 4 | Jos. Noel, operator | 50 00 | Nov. 1, 1913 | |
| 4 | Shipshaw | 1 | Miss M. Dufour, operat'r | 50 00 | " 1, 1907 | |
| 5 | St. Leonard | 4 | Geo. Gagnon, operator | 50 00 | Sept. 1, 1903 | |
| | To loop | 2 | | | | |
| 6 | St. Ambroise, loop wire | 8 | A. Simard, operator | 50 00 | June 1, 1905 | |
| 7 | St. Charles Borromée | 4½ | S. Bouchard " | 50 00 | Sept. 1, 1903 | |
| 8 | Taché | 7 | Jean Fradette " | 50 00 | Jan. 1, 1908 | |
| 9 | St. Louis de Nazaire, loop | 2½ | D. Blackburn | 50 00 | Sept. 23, 1912 | |
| | To loop | 4½ | | | | |
| 10 | St. Joseph d'Alma, loop wire | 6 | { P. Lavoie, operator<br>{ Gédéon Verreault, rep. | 50 00<br>360 00 | Aug. —, 1914<br>Mar. 1, 1909 | |
| 11 | St. Cœur de Marie | 6 | Alf. Rousseau, operator | 50 00 | Jan. 1, 1908 | |
| 12 | St. Henri de Taillon | 6½ | P. Boivin " | 50 00 | May 1, 1913 | |
| 13 | Honfleur | 8 | Charles Lindsay " | 50 00 | Jan. 1, 1909 | |
| 14 | Peribonka | 9 | Mrs. E. Niquette " | 50 00 | " 1, 1909 | |
| | | 81 | | 960 00 | | |

### CHICOUTIMI—LAC CLAIR SECTION.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Chicoutimi | 0 | (See above.) | | | |
| 2 | Ste. Anne | 2½ | " " | | | |
| 3 | Range 6 | 3 | | | | |
| 4 | Lac Charles | 3 | L. Boulaine | 50 00 | Nov. 1, 1904 | |
| 5 | Lac Clair | 4 | | | | Closed Dec. 12, 1912. |
| | | 12½ | | 50 00 | | |

## MURRAY BAY—BAIE ST. PAUL SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Murray Bay | 0 | Mrs. F. Vincent | | | | See North Shore section. |
| 2 | Guay | 5½ | S. Beaudreault, operator | 50 00 | July | 1, 1913 | |
| 3 | St. Agnes | 4½ | J. Pilote " | 50 00 | " | 1, 1913 | |
| 4 | St. Hilarion | 5 | N. Coulombe " | 50 00 | Sept. | 1, 1909 | |
| 5 | St. Urbain | 8½ | J. B. Simard " | | | | See Chicoutimi section. |
| | | | A. Gauthier, repairer | | | | " " |
| 6 | Baie St. Paul | 9 | F. Boivin, agent | | | | " " |
| | | 32½ | | 150 00 | | | |

## BAIE ST. PAUL—PETITE RIVIÈRE BRANCH.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Bay St. Paul | 0 | F. Boivin | | | | See Baie St. Paul, Chicoutimi section. |
| 2 | Petite Rivière (St. François). | 13 | L. J. Bouchard | 50 00 | Mar. | 31, 1914 | Payment at Baie St. Paul, $25 per year and $12 for battery care for operation of this branch to Petite Rivière. |
| | | 13 | | 50 00 | | | |

## BAIE ST. PAUL—ST. PLACIDE BRANCH.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Baie St. Paul | 0 | F. Boivin | | | | See Baie St. Paul, Chicoutimi section. |
| 2 | St. Placide | 8½ | D. Simard | 50 00 | May | 1, 1909 | |
| | | 8½ | | 50 00 | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.

### BAIE ST. PAUL—Chicoutimi Section.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 1 | Baie St. Paul | | F. Boivin, agent | 420 00 per annum† )<br>25 p.c. commission.... ) | April 1, 1885 | †Increase from $360, Sept. 1, 1909.<br>*The commission on business is 25 per cent of the Government tolls of the line; the amount guaranteed to be not less than $50 per annum. |
| 2 | St. Urbain | 9 | (J. B. Simard, agent<br>(A. Gauthier, repairer | 50 00 or commission..<br>360 00 per annum.. ... | July 1, 1912 | Increase from $270, July 1, 1909. |
| 3 | La Galette | 37 | Toussaint Girard | 150 00 or commission... | Aug. 1, 1913 | Salary increased to $150 per annum, June 1, 1907.<br>Plus $25 per year for operating branch line to L'Anse St. Jean. |
| 4 | Ferland | 27½ | | | | Ferland office closed, July 1, 1911. |
| 5 | St. Alexis | 10 | Mrs. D. Simard | 75 00 or commission. | Nov. 1, 1899 | |
| 6 | St. Alphonse de Bagotville | 3 | Mrs. C. Levesque | 150 00 per annum | June 1, 1906 | A. Gauthier's division includes the branch line to L'Anse St. Jean. |
| 7 | Chicoutimi | 11½ | | | | |
| | | 98 | | 1,205 00 | | †Salary increased to $360 per annum, June 1, 1907. |
| | *Branch Line.* | | | | | |
| | *St. Alexis* | 0 | Mrs. D. Simard | 75 00 | Jan. 1, 1912 | P. V. Lavoie resigned Oct. 1, 1911. |
| 8 | St. Felix d'Otis | 10 | A. Gaudreault | 50 00 | Nov. 1, 1907 | |
| 9 | L'Anse St. Jean | 30 | Eris Degagné, repairer | 425 00 | Sept. 1, 1903 | |
| 10 | Petite Saguenay | 8 | M. Trenblay | 50 00 | Feb. 1, 1905 | |
| 11 | Anse Cheval | 6 | | | | (This office has been closed since April 30, 1904). |
| 12 | St. Etienne | 7 | | | | |
| | *St. Catherine Bay* | 17 | G. Boulienne (see North Shore W. B. Line) | | | |
| | | 78 | | 600 00 | | |
| | Total | 176 | | 1,805 00 | | |

## NORTH SHORE (West Bersimis).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Murray Bay | 0 | Mrs. F. Vincent, operator | 50 00 or commission | April 1, 1885 | | Plus $25 per year, and $12 for battery care for operation of branch to Guay. |
| 2 | Cap à l'Aigle | 4 | A. Lapointe, operator | 50 00 " | May 1, 1914 | | |
| 3 | St. Fidèle | 6 | R. Dallaire, operator | 50 00 " | April 1, 1912 | | |
| 4 | Port au Persil | 7 | A. Villeneuve, repairer | 420 00 " | Feb. 1, 1913 | | |
| 5 | Cap Saumon Light (Loop from St. Siméon) | 2 | Thos. McLaren, operator<br>Delph. Bouchard, operat. | 50 00<br>50 00 or commission | May 1, 1912<br>April 1, 1910 | | |
| 6 | St. Siméon | 4 | Jos. Morin | 50 00 " | Aug. 1, 1912 | | |
| 7 | Baie des Rochers | 12 | F. Bouchard, operator | 50 00 " | Sept. 1, 1912 | | |
| 8 | St. Catherines Bay | 18 | G. Boulianne, repairer<br>Mde. D. Boulianne, oper. | 420 00<br>240 00 | Nov. —, 1886 | | Salary increased to $420 March 1, 1912. |

## NORTH SHORE (West of Bersimis)—*Continued.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | Tadoussac (1½ knot cable) | 1¼ | J. E. Caron, operator | 360 00 | Nov. 1, 1888 | | |
| 10 | Bergeronnes | 10 | Mde. M. Savard, operat. | 50 00 or commission | April —, 1885 | | |
| 11 | Bon Désir | 5 | Mde. E. Gauthier, oper. | 50 00 " | Aug. 1, 1904 | | |
| 12 | Escoumains | 12 | J. H. Topping, operator | 50 00 " | Aug. 1, 1885 | | |
| 13 | Baie des Bacons | 8 | P. Bouchard, operator | | May 6, 1902 | | Commission 25 per cent without guarantee. |
| 14 | Sault au Mouton | 6 | C. E. Nolet, operator | 50 00 or commission | Nov. 1, 1905 | | |
| 15 | Mille Vaches | 2 | Mde. L. Puize, operator | 50 00 " | Aug. 1, 1907 | | |
| 16 | Portneuf | 11½ | Leandre Bouchard, oper.<br>E. Courbron, repairer | 50 00<br>420 00 | July 1, 1890<br>April 1, 1888 | | |
| 17 | Hamilton Cove | 1 | | | | | Closed. |
| 18 | Sault au Cochon | 7 | | | | | Closed Sept. 30, 1896. |
| 19 | Bersimis West | 31 | Mrs. F. Miller, operator<br>E. Pope, Dist. Supt. | 50 00 or commission<br>2,400 00 | April 1, 1885 | | Including general accounting, and supervision of stores at Quebec. |
| | Total | 147¾ | | 4,960 00 | | | |

* NOTE.—In the estimates, the maintenance of the Chicoutimi and North Shore line is provided under head of North Shore Line. They are operated conjointly.

## NORTH SHORE (East of Bersimis).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Bersimis East | 5 | A. Maloney, agent | 550 00 | Sept. 21, 1896 | | |
| | | | Mrs. A. Maloney, asst. opr | 200 00 | July 1, 1906 | | Repeating office and 2 main batteries. |
| | | | Jos. Gagnon, repairer | 420 00 | Aug. 12, 1906 | | Plus 50 cents per day when absent on duty. |
| 2 | Point aux Outardes | 29 | Miss G. Ross, operator | 50 00 or commission | Jan. 1, 1910 | | |
| | | | D. Malouin, repairer | 420 00 | June 14, 1907 | | Plus 50 cents per day when absent on duty |
| 3 | Point Paradis | 18 | | | | | |
| 4 | Manicouagan | 14 | P. Martel and his son | 25 p.c. commission | Sept. 26, 1910 | | |
| 5 | Mistassini | 22 | W. Montreuil, operator lineman | 420 00 | Oct. 23, 1908 | | Plus 50 cents per day when absent on duty |
| 6 | River Godbout | 26 | N. A. Comeau | 50 00 or commission | Oct. 15, 1885 | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM—*Continued.*

### NORTH SHORE (East of Bersimis)—*Continued.*

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 7 | River Godbout West | ½ | N. A. Comeau, reparer. | 450 00 " | July 1, 1912 | |
| 8 | Point des Monts | 18½ | Victor Paffard | 50 00 " | Dec. 28, 1883 | |
| 9 | Trinity Bay West | 5½ | Jos. Poulin | 50 00 " | May 16, 1884 | |
| 10 | Trinity Bay East | 2½ | A. Bilodeau | 25 p.c. commission | May 1, 1889 | |
| 11 | Caribou Island | 7 | Jos. Chouinard | 25 " " | July 22, 1911 | |
| 12 | Egg Island Light | 8½ | Mrs. E Chouinard | Accommodation | July 22, 1911 | No commission paid. Telephone only with Pentecost office. |
| | Pointe aux Anglais | 2 | | 25 p.c. commission | 1895 | Cable from Egg Island. |
| 13 | Pentecost | 6½ | Jos Picard | 310 00 per annum | Sept. 20, 1911 | Main battery. |
| 14 | May Islands | 9 | A. Label | 25 p.c. commission | Sept. 15, 1913 | |
| 15 | Ste. Marguerite | 3-½ | A. Therriault | 180 per annum | July 1, 1888 | Also as line repairer for 40 miles from Hall to Rock Rivers. |
| 16 | Clark City | 5 | North Shore Power, Railway and Navigation Company | 25 p.c. commission | April 17, 1903 | |
| 17 | Seven Islands | 17¾ | P. E. Vignault, agent | 180 00 and 25 p.c. com. | Jan. 2, 1884 | Also see to small repairs when trouble between Hall and Moisie Rivers. |
| " | | | P. C. Vignault, gnl. rep | 540 00 | Jan. 12, 1912 | Plus 50 cents per day when absent on duty. |
| 18 | Moisie West | 14½ | Mrs. Chicoine, operator | 50 00 or commission | June 1, 1906 | |
| 19 | Moisie East | 1 | Holliday Bros | 50 00 | | In operation during fishing season |
| 20 | Pigou | 28 | Peter Wright, repairer | 112 00 | Oct. 1, 1902 | |
| | | | Mrs. P. Wright, operator | 100 00 | Oct. 1, 1902 | |
| 21 | Rivière aux Graines | 29 | Miss A. Blancy, operator | 50 00 | Oct. 6, 1910 | Agt. M. Langlois, $12 per year for office rent. |
| 22 | Sheldrake | 15 | Mrs. A. Girard, operator | 50 00 | Dec. 1, 1904 | Agt. A. Girard, $12 per year for office rent. |
| 23 | Thunder River | 6½ | Mrs. H. Cody, operator. | 50 00 | Feb 1, 1890 | $12 per month for care of main battery and $12 per year for office rent. |
| 24 | Magpie | 11 | Geo. Poirier, operator | 50 00 | Sept. 17, 1905 | Agt. G. Poirier, $12 per year for office rent. |
| 25 | St. John River | 9 | Ben. Chambers, operator | 50 00 | Oct. 1, 1899 | Agt. B. Chambers, $12 per year for office rent. |
| 26 | Long Point of Mingan | 10 | E. H. Tetu, Dist. Supt. | 1,080 00 | Nov. 1, 1891 | |
| | | | Mrs. E. H. Tetu, op'r. | 300 00 | Nov. 1, 1903 | Repeating office for Anticosti cable in operation since Sept. 1, 1891 (3 main batteries), repeaters. |
| | | | J. V. Guay, agent. | 500 00 | Nov. 1, 1910 | |
| | | | Mrs. Guay, asst. | 180 00 | | |
| 27 | Mingan | 7 | Mrs. C. Maloney, op'r. | 100 00 | | Salary increased to $100 per annum, March 31, 1907. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 28 | Point Esquimaux | 24 | Mrs. E. Cyr, operator | 240 00 | Sept. | 1, 1897 | |
| | | | E. Cyr, repairer | 500 00 | Nov. | 2, 1902 | Main battery. Plus 50 cents per day when absent on duty. Extra allowance at Esquimaux Point Telegraph, $48 a year for office rent; $40 a year for firewood; $24 a year for storage; 25 p.c. commission. |
| 29 | Betchouan | 20 | A. Desjardins, o'r and rep | 212 00 | July | 22, 1913 | At Pt. Esquimaux, Govt. Tel. supply agent Alfred Landry, from Betchouan eastward, salary $60 per year. |
| 30 | Piastre Bay | 23 | Mrs. J. Beetz, operator | 100 00 | Sept. | 18, 1902 | |
| | | | S. Tanguay, repairer | 112 00 | Sept. | 18, 1902 | |
| 31 | Watichou | 15 | Mrs. Cl. Bourque, op'r. | 100 00 | Dec. | 1, 1903 | |
| | | | John Bourque, repairer | 112 00 | Dec. | 1, 1903 | |
| 32 | Aguanus | 21¾ | Mrs. Galant, operator | 100 00 | Sept. | 3, 1902 | |
| | | | S. Galant, repairer | 112 00 | Sept. | 3, 1902 | |
| 33 | Natashquan | 21 | W. Vignault, op'r | 50 p.c. commission | Oct. | 20, 1911 | |
| | | | C. Vignault, repairer | 112 00 | Sept. | 5, 1902 | Main battery, $12 per year. |
| 34 | Kegaska | 33 | Miss Anderson, opr | 100 00 | Sept. | 6, 1902 | |
| | | | Geo. Anderson, repairer | 112 00 | Sept. | 6, 1902 | |
| 35 | Masquaro | 18 | J. L. Osborne, insp. | 500 00 | Nov. | 6, 1910 | Plus 50 cents per day when absent on duty. |
| | | | Mrs. Jennis, operator | 100 00 | April | 1, 1906 | |
| | | | Wm. Foreman, repairer | 112 00 | June | 1, 1903 | |
| 36 | Romaine | 25 | Mrs. A. Guillemette, opr. | 100 00 | Sept. | 17, 1902 | |
| | | | M. Blais, repairer | 112 00 | Sept. | 17, 1902 | |
| 37 | Wolf Bay | 24 | Mrs. R. Jones, operator | 100 00 | Nov. | 26, 1902 | |
| | | | R. Jones, repairer | 150 00 | Nov. | 26, 1902 | |
| 38 | Point au Maurier | 24 | Miss P. Galibois, opr | 100 00 | Sept. | 19, 1902 | |
| | | | J. Galibois, repairer | 112 00 | Sept. | 19, 1902 | |
| 39 | Harrington | 20 | Mrs. Jones, operator | 125 60 | Sept. | 20, 1902 | Tel. allowance $25 per year for repeating messages with Harrington Island since June 15, 1909. |
| | | | J. Jones, repairer | 112 00 | Sept. | 20, 1902 | |
| 40 | Whale Head | 17 | Amédée Vignault, operator and repairer | 212 00 | | | |
| 41 | Mutton Bay | 20 | Mrs. A. Landry, agt.-opr. | 444 00 | Aug. | 1, 1911 | |
| 42 | Baie de Ha ! Ha ! | 27 | Mrs. J. Monger, opr | 100 00 | June | 14, 1904 | |
| | | | J. Monger, repairer | 112 00 | June | 14, 1904 | |
| 43 | St. Augustine | 27 | C. F. Johnson, rep. & opr. | 212 00 | Sept. | 1, 1913 | |
| 44 | Chicatica Bay | 24 | Miss Esther Robin | 100 00 | June | 30, 1906 | Hudson Bay Co. post. |
| | | | George Robin | 112 00 | June | 30, 1906 | |
| 45 | Rocky Bay | 15 | James Kennedy, opr. and repairer | 212 00 | July | 27, 1911 | |
| 46 | Old Fort Bay | 15 | J. Fequet & son William | 25 p.c. commission | Mar. | 29, 1911 | |
| 47 | Bonne Espérance | 7 | G. Chevalier, repairer | 112 00 | Oct. | 2, 1902 | |
| | | | Miss Chevalier operator | 110 00 | Oct. | 2, 1902 | |
| 48 | Brador Bay | 29 | | 112 00 | | | J. Jones retaking charge Oct. 27, 1910, as opr. and sent his resignation for 1st April, 1911. |
| | | | Cyrille Jomeas, repairer | 110 00 | Oct. | 10, 1909 | |
| | | | A. Cormier, gen. rep | 500 00 | Aug. | 16, 1910 | Plus 50 cents when absent on duty. |
| 49 | Long Pt. of Blanc Sablon | 3 | " agent | 25 p.c. commission | Sept. | 1, 1911 | |
| 50 | Blanc Sablon | 3 | Thos. Morel, operator | 212 00 | Oct. | 1, 1902 | |
| 51* | Forteau Bay | 13 | A. Hart, rep. and opr. | 212 00 | July | 19, 1902 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### CHICOUTIMI AND NORTH SHORE OF ST LAWRENCE TELEGRAPH—*Continued.*

### NORTH SHORE (East of Bersimis)—*Continued.*

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 52 | Pointe Amour | 17 | Thos. Whyatt, rep. and operator | 112 00 | Feb. 17, 1903 | Main battery removed from West St. Modeste to Pt. Amour on Oct. 5, 1909, allowance $50 per yr. |
| 53 | West St. Modeste | 16 | Jas. Bolger, rep. and opr. | 212 00 | Oct. 5, 1902 | |
| 54 | Red Bay | 13 | Geo. Moore, repairer | 112 00 | Oct. 9, 1902 | |
| | | | Miss Moore, operator | 100 00 | Oct. 9, 1902 | |
| 55 | Chateau Bay | 30 | J Bolger | | | Office open Aug.-Oct., 1912. Salary, $35 per month |
| 56 | Belle Isle (cable) | | | | | Cable removed June 18, 1909. |
| | Totals | 914 | | 13,678 00 | | |

### LINE REPAIRERS, SECTIONS AND MILEAGE—MURRAY BAY TO CHATEAU BAY.

| | | Mileage. |
|---|---|---|
| A. Villeneuve, repairer | Murray Bay to Baie des Rochers | 35 |
| G. Boulianne, repairer | Baie des Rochers to Bergeronnes | 29½ |
| G. Boulianne, repairer | St Catherines Bay to St. Etienne branch line | 17 |
| Ed. Courbron, repairer | Bergeronnes to Rivière Colombier (16 miles west of Bersimis) | 67½ |
| Jos. Gagnon, repairer | Rivière Colombier to West Crossing Rivière aux Outardes (24 miles east of Bersimis) | 40 |
| David Malouin, repairer | East Crossing of Rivière aux Outardes to English Bay (7 miles east of Manicouagan) | 44 |
| Wm. Montreuil, repairer | English Bay to St. Nicholas Harbour (14 miles west of Godbout) | 27 |
| N. A. Comeau, repairer | St. Nicholas Harbour to Pointe des Monts | 32½ |
| P. C. Vigneault, gen. repairer | Pointe des Monts to Thunder River | 196¾ |
| Ed. Cyr, gen. repairer | Thunder River to Kegaska | 197½ |
| J. L. Osborne, gen. repairer | Kegaska to St. Augustine | 202 |
| A. Cormier, gen. repairer | St. Augustine to Chateau Bay | 185 |
| | | 1,073½ |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM.

| No. | Station. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 1 | Quebec | 0 | Great Northwestern Telegraph Co. | 185 00 | | This amount is paid for supervision of the line, and covers rent of pole line from Quebec to L'Ange Gardien, for which $35 per annum is charged |
| | *L'Ange Gardien* | 13 | | | | |
| | *Orleans Island (cable).* | $\frac{3}{4}$ | | | | |
| 2 | St. Pierre | $4\frac{1}{2}$ | E. Gendreau | 50 00 or commission. | Dec. 1, 1910 | This commission is 25 p. c. of the Government line tariff in each instance, and guaranteed to amount to not less than $50 per annum. |
| 3 | St Petronille | $3\frac{1}{4}$ | Desneiges Plante | 50 00 " | Oct. 1, 1896 | |
| 4 | St. Laurent | $6\frac{1}{2}$ | M. Gobeil | 120 00 and 25 per cent commission. | Sept. 15, 1888 | |
| 5 | St. Jean | 7 | P. Pouliot, dist. supt | 1,120 00 & 25 per cent commission. | Nov. 1, 1907 | For local agency. |
| 6 | St. François | $6\frac{3}{4}$ | Helene Lemelin | 50 00 or commission | Oct. 1, 1907 | Dist. Supt. and repairer. |
| 7 | Isle Reaux (including 2 knots cable). | $3\frac{1}{4}$ | | | | |
| | Isle Reaux (land line) | $2\frac{1}{4}$ | | | | |
| 8 | Grosse Isle Quarantine office (including 2 knots cable). | $3\frac{1}{2}$ | A. Dancause | 540 00 | Nov. 1, 1912 | $5 per month for messenger service in summer and $12 per annum allowed for care of main batt. at Grosse Isle. |
| | Quarantine telephone system, 2 wire line. | $1\frac{3}{4}$ | | | | NOTE—The telephone system on Grosse Isle since May, 1893, has comprised $1\frac{3}{4}$ miles of 2 wire line with 25 connections or stations. |
| | Grosse Isle to Crane Island (including 5 knots cable.) | 8 | Hector Lavoie | 50 00 or commission. | Feb. 1, 1912 | |
| | | | Fenelon Pinchard | accommodation. | " " | |
| | | | Olivier Gagné | " | " " | Connection with the Bell Telephone System at Montmagny. Four stations on Crane Island. |
| 9 | Crane Island to Montmagny (cable) | 5 | Désiré Vézina | Signal Service Lighthouse | Sept. 1, 1909 | |
| | | | Numa Vézina | | Feb. 1, 1912 | |
| | | | Chas. P. Roy | Accommodation | Nov. 1, 1913 | |
| | | | Jos. Lemieux | | " " | |
| 10 | Crane Island to Goose Island. | 10 | E. Bernier | Accommodation | " " | |
| | | | Alf. Roy | " | " " | |
| | | | | | " " | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM—*Continued.*

| No. | Stations. | Intermediate distance. | Agents. | Salaries per annum. | Date of appointment. | Memorandum. |
|---|---|---|---|---|---|---|
| | *Loop.* | | | | | |
| 11 | St. François—St. François Nord | 5 | J. Asselin | 50 00 or commission | April 1, 1912. | |
| 12 | St. Jean—Ste. Famille | 5½ | Nap. Pichette | 50 00 " | Aug. 21, 1912. | |
| | Totals | 86¼ | | $2,268 00 | | |
| | NOTE—In addition to the above there is included in the Quarantine Dist. Superintendency the undermentioned lines :— | | | | | |
| | *Telephone Lines.* | | | | | |
| | Les Eboulements<br>Ile aux Coudres (cable)<br>On Ile aux Coudres | 0<br>3<br>10 | | | | Leased to the Charlevoix and Saguenay Telephone Company. |
| | | 13 | | | | |
| | ORLEANS ISLAND TELEPHONE LINE. | | | | | |
| 1 | St. Pierre | 0 | Francis Côté | 50 00 or commission | July 1, 1911. | |
| 2 | Ste. Pétronille | 3½ | Desneiges Plante | 240 00 | April 1, 1911. | Allowance of $6 per month for messenger service. |
| 3 | St. Laurent | 6½ | Laurent Godbout | 50 00 or commission | July 1, 1911. | |
| 4 | St. Jean | 7 | Pierre Pouliot | 50 00 " | Dec. 1, 1910. | |
| 5 | St. François | 6¾ | Xavier Lepage | 50 00 " | July 1, 1912. | Government line connects with the Bell Telephone Co.'s line at L'Ange Gardien. Exchange connections made at Ste. Pétronille. |
| 6 | St. François-Nord | 5 | Frs. Lessard | 50 00 " | Dec. 1, 1910. | |
| | *Branch.* | | | | | |
| 7 | St. Jean—Ste. Famille | 5½ | Jos. Prémont | 50 00 " | Dec. 1, 1910 | |
| | | 34 | Pole line : 34 miles | Wire : 68 miles. | | |

## BEAUPORT-LAVAL TELEPHONE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Quebec—Beauport | | | | | |
| | Beauport | | Bell Telephone Co | | | |
| 1 | Laval | | L. Maheux | 25 p. c. commission | Jan. 1, 1914 | Connection at Beauport with the Bell Telephone System. |
| 2 | Ste. Thérèse | | J. Auclair | 25 p. c. commission | Jan. 1, 1914 | |
| 3 | Ste. Therese | 2 | N. Bédard | 25 p. c. " | Jan. 1, 1912 | |
| 4 | Laval | | L. E. Binet | 25 p. c. " | Jan. 1, 1914 | |
| 5 | Vallière's Mill | 5½ | A. Vallière | 50 p. c. " | Feb. 1, 1910 | |
| 6 | Laval | 7½ | Rev. E. Giroux | Accommodation. | | |
| 7 | Laval | | Mrs. Touchette | 50 00 | Feb. 1, 1910 | *Commission is on Government line tolls only, and at Laval and Vallières Mill is guaranteed at the rate of $50 per year. |
| 8 | Laval | | Peres Aublon | Sub | Sept. 1, 1414 | |
| | Total | 15 | | | | |

## CHARLESBOURG—LAKE BEAUPORT—STONEHAM TELEPHONE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Quebec—Charlesbourg | 4 | Bell Telephone Co | $ 64 p. a. | July 26, 1913 | |
| 9 | Lake Beauport | 6 | Mrs. J. Bigouette | 25 p. c: Rets | Dec. 27, 1913 | |
| 10 | " " West | 3 | Mrs. Brown | " | Jan. 18, 1914 | |
| 11 | " " | | J. Cloutier | Sub | April 2, 1914 | |
| 12 | " " | | Mrs. Cummings | " | Sept. 1, 1914 | |
| 13 | " " | | Mayor Murphy | " | Jan. 10, 1914 | |
| 14 | " " | | Miss F. Simons | " | " 10, 1914 | |
| 15 | " " | | C. E. Smith | " | " 15, 1914 | |
| 16 | Stoneham | 18 | J. Corrigan | $ 50 p. a. | Nov. 4, 1914 | |
| 17 | " | | W. Craig | Sub | Jan. 15, 1914 | |
| 18 | " | | S. Plamondon | " | " 15, 1914 | |
| 19 | " | | L. A. Bilodeau | " | Sept. 1, 1914 | |
| 20 | Martineau Mills | 3 | A. Martineau | 25 p. c. Rets | Nov. 1, 1913 | |
| 21 | Tewkesbury | 13½ | W. Boyd | " | " 8, 1913 | |
| 22 | " | | Donacomna | Sub | " 8, 1913 | |
| 23 | " | | J. Isobel | " | April 30, 1914 | |
| 24 | " | | Three Lakes Fish Club | " | " 29, 1914 | |
| 25 | Lake St. Charles | 5 | L. P. Verret | 25 p. c. Rets | Nov. 4, 1913 | |
| 26 | " " | | C. E. Begin | Sub | Dec. 6, 1913 | |
| 27 | " Huron | 4 | H. Gale | " | Nov. 8, 1913 | |
| 28 | Askewra Village | 3 | E. Laliberte | " | Dec. 5, 1913 | |
| 29 | Lac St. Charles | | A. E. Seifert | " | Sept. 1, 1914 | |
| 30 | St. Ignace | 7¾ | E. Reaume | 25 p. c. Rets | Feb. 25, 1914 | |
| 31 | " | | J. Sansfacon | Sub | Feb. 25, 1914 | |
| 32 | Lorette | 3 | L. Bastien | " | Sept. 1, 1914 | |
| 33 | " | | Dr. Verret | " | " 1, 1914 | |
| 34 | St. Gerard | 8 | A. Boivin | 25 p. c. Rets | " 1, 1914 | |
| 35 | " | 4 | T. Thompson | Sub | " 1, 1914 | |
| 36 | River Jaune | | Mrs. A. Michaud | $ 50 p. a. | July 1, 1914 | |
| | General Repairer | | E. Martineau | $480 p. a | Mar. 1, 1914 | |
| | | 97¾ | | $594. | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### TIMISKAMING DISTRICT TELEPHONE LINES.

| No. | Stations, | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 1 | Kippewa Dam | 0 | J. A. Boisvert, Agent | 25% commission | May 20, 1911 | |
| | Denis | 14½ | | | | |
| 2 | Fabre | 6 | L. Valiquette, Agent | 25% " | May 20, 1911 | |
| 3 | Ville-Marie | 13 | J. Samson, Agent | 25% " | May 17, 1911 | Resigned Sept. 15, 1911. |
| | | | Mrs. L. Lepage, Agent | 25% " | Sept. 15, 1911 | Guaranteed commission to $50 per annum. |
| | | | J. Dumulon, Supt. and General Repairer | $65 00 per month | Nov. 13, 1911 | And expenses while out on repair work. |
| 4 | Lorrainville | 5 | N. Legault, Agent | 25% commission | Sept. 1, 1911 | |
| 5 | St. Eugène | 13½ | J. Bedard, Agent | 25% " | Sept. 1, 1911 | |
| 6 | Camp "B" | 7½ | | | | |
| 7 | Camp "A" Quinze Dam | ½ | P. Carrière, Agent | 25% " | Mar. 1, 1912 | Previous to March 1, 1912, office was in charge of Mr. G. B. Hull, Engineer in Charge Construction Quinze Dam. |
| 8 | Camp "C" | 5 | | | | |
| 9 | North Timiskaming | 13½ | J. R. Monaghan, Agent | 25% " | Aug. 1, 1911 | $75 per year is paid Mr. Monaghan for office rent and Exchange Connection with Timiskaming Telephone Company's Line. |
| | *Branch.* | | | | | |
| | Ville Marie | 0 | | | | |
| | St. Isidore | 3½ | J. N. Legault | 25% " | Dec. 1, 1912 | (Branch starts from main line 10 miles N. E. of Ville Marie.) |
| | | 82 | | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### ONTARIO—PELEE ISLAND TELEGRAPH SERVICE.

19 — A — 4

STATEMENT showing List of Offices, Operators or Agents, Commissions or Salaries, and Summary of Messages exclusive of free messages. From March 31, 1914, to March 31, 1915.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Messages. Sent. | Messages. Rec'd. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|---|---|
| | | Miles. | | | | | | |
| 1 | Dis't. Supt's. House | 0 | J. McR. Selkirk, Dist. Supt. | $50 00 per annum. | | | | Private Instrument. |
| 2 | Leamington Office | 0 | " " " | Commission 20 p.c | 87 | 57 | Nov. 1, 1888 | |
| | " " | 2½ | To Cable Landing (mainland). | | | | Aug. —, 1901 | West of Leamington Dock. |
| | Mainland to Pelee Island | 17½ | Cable to Pelee Island | | | | Nov. 1, 1888.. / Aug. —, 1901.. | Near Scudder, Pelee Island. |
| | | | Cable to Pelee Island connected with Pelee Island Municipal System | | | | Nov. 4, 1913 | " " " |
| 3 | Baird's House (Leamington) | 0¼ | James E. Quick, repairer | $50 00 per annum. | | | April 11, 1911 | Resides at Scudder. P. Id. |
| | | | A. Baird | Commission 25 p.c | | | Nov. 2, 1904 | Distance given is from Cable landing. |
| 4 | Jackson & Moss (Pt. Pelee) | 5 | Jackson & Moss | " " | 8 | 19 | Mch. 25, 1910 | Near Old Club House site. |
| 5 | Edward Ford (Pt. Pelee) | 0 | Edward Ford | Accommodation Office | | | Oct. 2, 1912 | Deputy Game & Fish Warden. |
| 6 | Baird's House (Pt. Pelee) | 2½ | | " " | | | June 23, 1909 | |
| 7 | Tilden's | 0¼ | W. Tilden | Commission 25 p.c | 16 | 11 | April 29, 1905 | |
| 8 | Point Pelee | 2½ | J. W. Grubb | " " | 19 | 48 | Nov. 1, 1888 | |
| 9 | Life Saving Station | 0¼ | L. Wilkinson | " " | 14 | 9 | June 11, 1914 | |
| | | | Total messages for year | | 144 | 144 | 144 | Point Pelee Branch Only. |
| | Pelee Island Municipal System. | 0 | Pelee Island Corporation; cable messages only | | 532 | 506 | = 1,038 | Messages per Pelee Island reports only. |
| | Total | 30½ | | | | | 1,182 | Messages for year. |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### NORTH WEST TELEGRAPH LINES—QU'APPELLE-EDMONTON SECTION.

| No. | Stations | Inter-mediate distance. | Agents and Operators. | Salaries per annum. | Date of Appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | | | $ cts. | | |
| 1 | Qu'Appelle | 0 | E. P. Benoit | 120 00 | Jan. 1, 1911. | |
| 2 | Fort Qu'Appelle | 17 | P. R. Elmer | 960 00 | Aug. 15, 1906... | |
| | Fort Qu'Appelle | | D. Sutherland, lineman.. | 900 00 | Dec. 1, 1909... | |
| | To Loop | 10 | | | | |
| 3 | Lipton | 1 | Can. Pac. Ry | 10 p.c. commission | May 1, 1906.... | |
| | To Main line | 1 | | | | |
| 4 | Kutawa | 45 | A. V. Lindeburgh | 900 00 | Nov. 1, 1883.... | |
| 5 | South Humboldt | 78 | H. J. Macdonald.. | 900 00 | Feb. 1, 1904.... | |
| | To Loop | 58½ | | | | |
| 6 | Saskatoon | 14 | J. H. Murphy | 1,200 00 | Jan. 18, 1913.... | |
| | " | | C. T. Clement, lineman.. | 900 00 | Oct. 16, 1903 ... | |
| | " | | Can. Pac. Ry. messenger. | 120 00 | May 1, 1911.... | |
| | To Main line | 14 | | | | |
| 7 | Henrietta | 38 | W. J. Salsbury.. | 900 00 | Oct. 1, 1886.... | |
| 8 | Battleford | 47 | J. D. Noel, chief operator | 1080 00 | Oct. 1, 1900.... | |
| | " | | J. Jackson, assistant | 900 00 | March 21, 1914 .. | On Military Service since August 19, 1914. |
| | " | | G. B. Binstow, assistant.. | 900 00 | Sept. 1, 1914 ... | |
| | " | | H. C. Rogers, lineman.. | 900 00 | Oct. 10, 1911.... | |
| | " | | E. Taylor, messenger.... | 240 00 | Dec. 1, 1914.... | E. Bidart, resigned. |
| 9 | Bresaylor | 28 | J. T. Callahan | 720 00 | Dec. 1, 1900.... | |
| | To Loop | 67½ | | | | |
| 10 | Lloydminster | 29 | H. A. Elliott | 900 00 | July 1, 1914.... | G. Crisfield, resigned. |
| | " | | G. G. Mann, lineman.. | 900 00 | Aug. 1, 1902.... | |
| | To Main Line | 29 | | | | |
| 11 | Onion Lake | 13 | H. McCleneghan, circuit manager | 1200 00 | Aug. 1, 1899 .. | |
| | " | | R. McCleneghan, asst... | 720 00 | Dec. 1, 1913... | |
| 12 | Frog Lake | 23 | E. A. Bowtell | 600 00 | March 1, 1911. | |
| 13 | Mooswa | 14 | A. Bowtell | 840 00 | Dec. 1, 1907.... | Distance increased owing to shifting line from fields to roadway. |
| 14 | Elk Point | 21½ | | | | Office closed. |
| 15 | St. Paul de Metis | 19½ | J. A. Gagnon | 900 00 | May 1, 1910.... | Line distance increased owing to shifting line from field to roadway. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16 | Saddle Lake | 18 | C. B. Ingraham | 900 00 | July | 1, 1912 | |
| 17 | Pakan | 39 | R. McAdam | 720 00 | Feb. | 1, 1905 | Line distance increased owing to shifting line from field to roadway. |
| | To Loop | 5 | | | | | |
| 18 | Andrew | 5 | R. L. Pickell | 900 00 | Jan. | 1, 1913 | |
| | " | | W. J. Lee, lineman | 900 00 | Jan. | 5, 1914 | C. Norn, resigned. |
| 19 | Whitford | 7 | Postmaster | 25 p.c. commission | July | 1, 1905 | |
| | Andrew to Main Line | 5 | | | | | |
| | To Loop | 23 | | | | | |
| 20 | Lamont | 3½ | W. Valliant | 900 00 | Nov. | 1, 1914 | H. A. Elliott, transferred. |
| | To Main Line | 3½ | | | | | |
| 21 | Fort Saskatchewan | 24 | W. G. Shera | 720 00 | July | 1, 1912 | |
| 22 | Edmonton | 18 | P. R. Campbell, agent | 1,080 00 | July | 24, 1914 | G. Wilder on construction. |
| | " | | A. H. Slight, assistant | 1,020 00 | Mar. | 16, 1914 | |
| | " | | R. S. Shields, assistant | 1,020 00 | Nov. | 1, 1914 | |
| | " | | E. J. Kane, clerk | 1,020 00 | Nov. | 1, 1914 | New appointment. |
| | " | | H. Hunt, clerk | 1,080 00 | Jan. | 22, 1912 | |
| | " | | R. Berry, messenger | 300 00 | Mar. | 11, 1915 | A. McGuire resigned. |
| | " | | J. McLean, lineman | 900 00 | Jan. | 1, 1915 | J. D. McIntyre resigned. |
| | " | | J. Saidler, lineman | 900 00 | June | 15, 1914 | On Military Service since Aug. 22, 1914. |
| | " | | R. C. Macdonald, district superintendent | 2,300 00 | Oct. | 1, 1905 | |
| | " | | J. S. Macdonald, general inspector | 2,500 00 | June | 1, 1905 | |
| | Total | 719 | | 34,860 00 | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### EDMONTON-PEACE RIVER SECTION.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| | Edmonton | 0 | Preceding table. | | | |
| 1 | Halfway Lake | 49 | J. C. Eggr | 25 p.c. commission | Jan. 1, 1910 | |
| 2 | Athabasca | 49 | C. P. Samwell | 900 00 | June 1, 1913 | |
| | " | | A. W. Cass, lineman | 900 00 | " 19, 1912 | |
| | " | | F. Pettiford, lineman | 900 00 | Dec. 1, 1914 | |
| | " | | E. Swanson, messenger | 240 00 | May 1, 1913 | |
| 3 | Mirror Landing | 70 | P. F. Hoyte | 900 00 | Sept. 1, 1914 | A. E. Holmes, resigned. |
| | " | | S. Green, lineman | 900 00 | Aug. 1, 1914 | A. Parry on construction. |
| 4 | Sawridge | 38 | R. H. Simpson | 900 00 | July 1, 1914 | J. M. Royer, resigned. |
| | " | | L. Young, lineman | 900 00 | Nov. 1, 1913 | On Military service since November 17, 1914. |
| | " | | E. Goodwin, lineman | 900 00 | " 17, 1914 | |
| 5 | Giroux Bay | 39 | | | | Office closed. |
| 6 | Grouard | 39 | J. A. Powers. | 900 00 | Aug. 1, 1913 | |
| | " | 39 | C. A. Burpee, assistant | 900 00 | Jan. 25, 1915 | R. Harper, resigned. |
| | " | | J. A. Bell, lineman | 1,020 00 | Feb. 5, 1914 | |
| | " | | Fred Knibbs, messenger. | 300 00 | Mar. 1, 1915 | A. St. Germin, resigned. |
| 7 | Peace River | 83 | E. W. Arnold | 900 00 | Jan. 1, 1915 | P. Gauvreau, resigned. |
| | " | | A. F. Todd, assistant | 900 00 | Oct. 30, 1914 | New appointment. |
| | " | | F. Anderson, lineman | 900 00 | " 23, 1912 | |
| | " | | J. A. Connery, messenger | 300 00 | Mar. 5, 1915 | F. Chalmers, resigned. |
| 8 | Vanrena | 62 | H. L. Propst, receipts and checks | 25 p.c. commission | Jan. 1, 1912 | |
| 9 | Dunvegan | 12 | A. Vaillancourt | 900 00 | Nov. 11, 1912 | |
| 10 | Spirit River | 15 | W. R. Holden | 900 00 | July 1, 1912 | |
| | To Loop | 53 | | | | |
| 11 | Grand Prairie City | 8 | J. H. Byrne | 900 00 | Sept. 2, 1912 | |
| | To Main line | 8 | | | | |
| 12 | Lake Saskatoon | 8 | G. Coleman | 900 00 | March 20, 1913 | |
| | " | | W. Lovel, lineman | 900 00 | June 1, 1914 | R. Harvey, resigned. |
| 13 | Pouce Coupe | 75 | J. J. Dever | 900 00 | July 1, 1914 | New office, Agent Dever transferred from Mirror Landing. |
| 14 | Fort St. John | 70 | | 1,020 00 | | G. Wilder, foreman of construction charge temporarily. |
| | Total | 678 | | 19,980 00 | | |

## MOOSEJAW—WOOD MOUNTAIN SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Moosejaw | 0 | M. Kavanagh | 1,020 00 | Sept. 15, 1914 | J. Lovelace resigned. |
| | " | | C. P. R. messenger | 120 00 | July 1, 1911 | |
| | " | | C. P. R. Battery | 120 00 | Feb. 1, 1912 | |
| 2 | Expanse | 39 | G. T. Brown | 900 00 | Sept. 20, 1912 | |
| | " | | C. H. R. Clark, lineman. | 900 00 | Sept. 1, 1913 | |
| | To loop | 25 | | | | |
| 3 | Gravelbourg | 19 | J. A. Hamelin | 900 00 | Sept. 8, 1910 | |
| | To main line | 19 | | | | |
| 4 | Limerick | 13 | Myrtle Crosson | 720 00 | Nov. 18, 1913 | |
| | To loop | 3 | | | | |
| 5 | Assiniboia | 14 | R. Hodgson | 900 00 | Sept. 4, 1912 | |
| | To main line | 14 | | | | |
| 6 | Wood Mountain | 27 | J. H. Thomson | 900 00 | Dec. 1, 1890 | |
| | " | | F. Brown, lineman | 900 00 | Nov. 1, 1905 | |
| 7 | Elm Springs | 13 | Office closed | | | |
| 8 | Willow Bunch | 26 | M. A. Noel | 900 00 | Oct. 19, 1904 | |
| | | 212 | | 8,280 00 | | |

## BATOCHE—DUCK LAKE SECTION.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Batoche | 0 | Mr. Racette | 25 % commission | | |
| 2 | Duck Lake | 9 | C. A. Baker | 120 00 | July 1, 1914 | |
| | | 9 | | 120 00 | | |

## BATTLEFORD—ISLE LA CROSSE SECTION.

| | | | | $ cts. | | |
|---|---|---|---|---|---|---|
| | Battleford | 0 | Main Time Table | | | |
| 1 | North Battleford | 4 | F. J. Colmer | 1,080 00 | Nov. 1, 1912 | |
| | To loop | 21 | R. Colmer, messenger. | 240 00 | May 7, 1913 | |
| 2 | Meota | 10 | F. W. Hearn | 900 00 | Nov. 1, 1913 | |
| | To main line | 10 | | | | |
| 3 | Glaslyn | 30 | A. G. McCartney | 900 00 | Sept. 26, 1912 | |
| 4 | Meadow Lake | 66 | J. R. McCordic | 900 00 | Sept. 9, 1912 | |
| 5 | Green Lake | 44 | R. White | 900 00 | Oct. 17, 1912 | |
| | | 185 | | 4,920 00 | | |

## GOVERNMENT TELEGRAPH SERVICE.—*Continued.*

### BRANCH TELEPHONE LINES.

| No. | Stations. | Intermediate distance | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | | | $ cts. | | |
| | Edmonton | 0 | | | | This line was built in 1904 and is being operated from the Central Telephone office in Edmonton. |
| 1 | Winterburn | 8½ | | | | |
| 2 | Indian Agency | 5⅓ | | | | |
| 3 | Spruce Grove | 8 | | | | |
| 4 | Stony Plain Centre St'n | 6½ | | | | |
| 5 | Stony Plain Centre | 3½ | | | | |
| | | 32 | | | | |
| | Edmonton | 0 | | | | This line has been in operation to St. Albert since 1887 and to Alexandre since 1902 and is operated from the Central Telephone office in Edmonton. |
| 1 | St. Albert | 9 | | | | |
| 2 | Raye | 12 | | | | |
| 3 | Rivière-Qui-Barre | 8 | | | | |
| 4 | Alexandre | 5 | | | | |
| | | 34 | | | | |

### FILE HILLS LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Fort Qu'Appelle | 0 | | | | This line was built in 1908 for the convenience of the Department of Indian Affairs exclusively. |
| 2 | Lebret | 4 | | | | |
| 3 | Balcarres | 11 | | | | |
| 4 | File Hills Agency | 13 | | | | |
| | | 28 | | | | |

## BRANCH TELEPHONE LINES.

### KAMSACK LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Kamsack, C. N. R. | 0 | | | | This line was built in 1907 for the Department of Indian Affairs. Kamsack is on the C. N. R. 100 miles Nor-heast of Fort Qu'Appelle and is in no way connected with the Government Telegraph line. |
| 2 | Dr. Wallace's office | 0 | | | | |
| 3 | Indian Agency | 6½ | | | | |
| 4 | St. Phillips Mission | 5 | | | | |
| 5 | Hudson Bay Co. (Pelly) | 7 | | | | |
| 6 | Keys Reserve | 5½ | | | | |
| | | 24 | | | | |

### DUCK LAKE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Duck Lake, C. N. R. | 0 | | | | This line was built in 1902 for the use of the Department of Indian Affairs exclusively. |
| 2 | R. N. W. M. P. | 0½ | | | | |
| 3 | Indian agency | 3 | | | | |
| | | 3½ | | | | |

### SADDLE LAKE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Saddle Lake | 0 | | | | This line was built in 1900 for the use of the Department of Indian Affairs exclusively. |
| 1 | Industrial School | 6½ | | | | |
| | | 6½ | | | | |

### PEACE RIVER—SHAFTSBURY TELEPHONE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | Peace River | 0 | | | | This line was built in 1911. The telephones are installed on a rental basis of $15 per annum, conditionally that they are also intended for the use of the public when wishing to reach our Peace River office for which a charge of 10 cents will be made. |
| 1 | Collins | 3 | | | | |
| 2 | R. C. Mission | 5 | | | | |
| 3 | A. Brick | 6½ | | | | |
| 4 | English Church Mission | ½ | | | | |
| | | 15 | | | | |

## GOVERNMENT TELEGRAPH SERVICE.—*Continued.*

### GROUARD—PRAIRIE RIVER TELEPHONE LINE.

| No. | Stations. | Intermediate distance. | Agents and Operators. | Salaries per annum. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|
| | | Miles. | | $ cts. | | |
| 0 | Grouard | 0 | | | | This line was built in 1912 and 1913. These telephones were installed at a rental basis to the parties named at an annual charge of $15, conditionally that they are also intended for the use of the public when wishing to reach our Grouard office for which a charge of 10 cents will be made. |
| 1 | B. A. See | 3 | | | | |
| 2 | Martin Ouellette | 5 | | | | |
| 3 | Travers Bros. | 4 | This 'phone disconnected. | | | |
| 4 | D. S. Hayden | 8 | | | | |
| 5 | Mr. McQue | 5 | | | | |
| 6 | S. Harris | 1 | | | | |
| 7 | O. D. Hill | 2 | | | | |
| 8 | G. Martin | 3 | | | | |
| 9 | J. Bennie | 1 | | | | |
| 10 | L. Becker | 2 | | | | |
| 11 | W. Lesage | 3 | | | | |
| | | 37 | | | | |

### ASSINIBOIA RESERVE—SINTALUTA TELEPHONE LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | Sintaluta | 0 | | | | This line was built in 1913 for the use of the Department of Indian Affairs exclusively. |
| 1 | Assiniboia Reserve | 8 | | | | |
| | | 8 | | | | |

### ATHABASKA—FORT McMURRAY LINE.

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | Athabaska | * | | | | |
| 1 | Calling River | 39 | E. J. Collins | 900 00 | August 20, 1914. | |
| 2 | Pelican | 61 | W. B. Twitchell | 900 00 | October 1, 1914. | |
| 3 | House River | 55 | J. H. Bell | 900 00 | December 1, 1914. | |
| 4 | Fort McMurray | 90 | C. N. Hayes | 900 00 | March 25, 1915. | |
| | | 245 | | 3,600 00 | | |

ATHABASKA—LAC LA BICHE LINE.*

| | | | | | | |
|---|---|---|---|---|---|---|
| 0 | Athabaska | | | | | |
| 1 | Plamondville | 58 | W. J. Ansell | 900 00 | November 13, 1914. | |
| | | 58 | | 900 00 | | |

*See Main Line Table, Peace River Line.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

## KAMLOOPS—OKANAGAN—KOOTENAY LINES.

### KAMLOOPS—LOWER NICOLA—PRINCETON.

| No. | Stations. | Inter-mediate distance. | Agents and Operators. | Position. | Salaries per month. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|---|
| | | Miles. | | | $ cts. | | |
| 1 | Kamloops, Supt. office | | W. H. Stevens | Superintendent | 150 00 | March 1, 1914 | Salary increase $25 00 September 1, 1913. |
| | " " | | Miss V. L. Palmer | Clerk | 60 00 | Oct. 1, 1911 | |
| | " " | | Miss M. H. Palmer | Stenographer | 50 00 | July, 1, 1913 | |
| | " " | | Supt. offices | Rent | 30 00 | | |
| | " agent long distance offices | | Miss G. Ellis | Agent | 50 00 | March 31, 1915 | Vice Miss Grindrod resigned, salary increased $5 per month, March 31, 1915. |
| | " " | | Mrs. Shelton | Operator | 40 00 | Aug. 11, 1913 | |
| | " " | | Bernard Hirst | Bookkeeper | 35 00 | Sept., 1912 | |
| | " " | | Vincent Beckwith | Messenger | 20 00 | Sept., 1914 | |
| | " " | | Long distance office | Rent | 20 00 | | |
| | | | Warehouse and workshop | " | 12 00 | | |
| 2 | Knutsford | 5 | C. Taylor | Agent | 20% Comm'n | Dec., 1914 | |
| 3 | Bulmans | 12 | J. Bulman | " | " | July, 1909 | |
| 4 | McDonalds | 5 | W. R. McDonald | " | " | " 1901 | |
| 5 | Stump Lake | 4 | J. Whitford | " | " | " 1910 | |
| 6 | Murrays | 3 | Wm. Murray | " | " | " 1913 | Spur 3 miles from Stump Lake. |
| 7 | Frasers | 0 | M. Fraser | " | " | " 1905 | |
| 8 | Rockford | 4 | Mrs. D. C. Wilson | " | " | " 1914 | |
| 9 | Moores | 4 | Jos. Guichon | " | " | " 1905 | |
| 10 | Guichons | 3 | " | " | " | " 1913 | |
| 11 | Landers | 7 | Wm. Lander | " | " | " 1913 | Spur from Quilchena. |
| 12 | Douglas Lake | | F. B. Ward | " | " | " 1913 | |
| 13 | Quilchena | 9 | J. A. Guichon | " | " | May, 1907 | |
| 14 | Nicola | 9 | Mrs. M. V. Munro | " | 50 00 | July, 1905 | Local exchange of subscribers. |
| 15 | Merritt | 7 | Miss D. P. McGoran | " | 50 00 | Nov., 1913 | " " " |
| | " | | Nellie Heslop | Operator | 35 00 | " 1913 | Salary increased $5 per month March, 1915. |
| | " | | M. T. Boyd's | Lineman | 100 00 | " 1913 | |
| | | | Merritt Office | Rent | 20 00 | | |
| 16 | Coutlee | 3 | H. S. Cleasby | Subscribers | | | Spur from Merritt. |
| 17 | Lower Nicola | 4 | Mrs. Woodword | " | | | |
| 18 | S. X. Ranch | 11 | W. Thompson | Agent | 20% Comm'n | Feb., 1914 | |
| 19 | Crowders | 7 | F. Crowder | " | " | Oct., 1911 | |
| 20 | Aspen Grove | 6 | W. Augstadt | " | " | Aug., 1914 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21 | Hastings Ranch | 7 | C. R. Betterton | " | " | " | 1914 | | |
| 22 | Canyon House | 6 | A. B. Roberts | " | " | March, | 1915 | | |
| 23 | Otter Valley | 12 | J. G. Thynne | " | " | Oct., | 1907 | | |
| 24 | Tulameen | 7 | J. Schubert | " | " | Sept, | 1911 | | |
| 25 | Coalmont Collieries | 3 | A. N. Cantril | " | " | March 1, | 1914 | | |
| 26 | Coalmont | 1 | Isaac McTavish | " | " | July 1, | 1913 | | |
| 27 | Granite Creek | 3 | F. P. Cook | " | " | Dec. 1, | 1911 | | |
| 28 | Roany's Camp | 8 | C. Lee | " | " | July. 1, | 1914 | | |
| 29 | Princeton | 3 | A. Bell | " | 50 00 | Aug., | 1908 | Local exchange subscribers. | |
| | " | | Office | Rent | 5 00 | | | | |
| | " | | D. A. Miner | Lineman | 80 00 | Oct. 29, | 1913 | | |
| 30 | Copper Mountain | 12 | T. J. Largue | Agent | 20% Comm'n | Jan. 1, | 1915 | Spur from Princeton. | |
| 31 | Voigts Camp | 2 | E. Voight | " | " | " | 1915 | | |
| 32 | Hedley | 25 | F. M. Gillespie | " | 40 00 | Aug., | 1909 | Local exchange subscribers. | |
| | " | | Office | Rent. | 5 00 | | | | |
| 33 | Keremeos | 20 | F. Gibson | Agent | 50 00 | Nov., | 1914 | H. Etches enlisted, Nov. 1, 1914. | |
| 34 | Richters | 2 | F. Richters Estate | " | 20% Comm'n | Oct., | 1908 | | |
| 35 | Fairview | 18 | S. J. McCuddy | " | 20 00 | July, | 1909 | Now switching office for Fairview-Midway line. | |
| | Total | 232 | | | | | | | |

KAMLOOPS—VERNON—PENTICTON.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 36 | Vaseaux Lake | 9 | Mrs. K. Mackenzie | Agent | Commission. | July, | 1914 | Commission 20 p.c. |
| 37 | Okanagan Falls | 6 | W. B. Hine | " | " | Oct., | 1908 | " " |
| 38 | Kaleden | 6 | A. S. Hatfield | " | " | Oct., | 1910 | " " |
| 39 | Marron Lake | 8 | W. Smythe Parker | " | " | Nov., | 1910 | " " |
| 40 | Penticton | 10 | Carrie Crowe | " | 60 00 | Nov. 1, | 1912 | |
| | " | | Robert Park | Operator | 25 00 | Sept., | 1913 | |
| | " | | C. F. Layton | Lineman | 80 00 | Nov., | 1911 | |
| | " | | Telephone Office | Rent | 25 00 | | | |
| 41 | Summerland | 11 | W. H. Hayes | Agent & Tel. opr. | 75 00 | July, | 1906 | |
| | " | | Office rent | Rent | 10 00 | | | |
| 42 | Peachland | 18 | A. W. McDougald | Agent | Commission. | Aug., | 1912 | " " |
| 43 | Gellatlys | 1 | D. E. Gellatly | " | " | July, | 1914 | " " |
| 44 | Glen Rosa | 3 | W. C. Hitchiner | " | " | " | 1914 | " " |
| 45 | Westbank | 17 | Mrs. C. Warren | " | " | March, | 1915 | " " |
| 46 | Kelowna | 3 | H. H. Millie | " & Tel. opr. | 80 00 | Nov., | 1912 | |
| | " | | Eleanor Pennell | Telephone opr. | 40 00 | " | 1912 | |
| | " | | Office rent | Rent | 12 00 | | | |
| 47 | Okanagan Mission | 3 | H. R. F. Dodd | Agent | Commission. | Oct., | 1914 | " " |
| 48 | Oyama | | B. F. Scott | " | " | " | 1914 | " " |
| 49 | Okanagan Centre | | J. A. Gleed | " | " | March, | 1910 | " " |
| 50 | Okanagan L'dg | | T. L. Tibbs | " | " | " | 1915 | Spur 4 miles from Vernon. |
| 51 | Vernon | | Mrs. B. Steward | " & Tel. opr. | 85 00 | Aug. 20, | 1913 | |
| | " | | Marjorie Lifford | Telephone opr. | 40 00 | July 31, | 1914 | |
| | " | | A. Hatfield | Messenger | 20 00 | Sept. 1, | 1914 | |
| | " | | R. F. Wright | Lineman | 80 00 | July 1, | 1914 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### KAMLOOPS—VERNON—PENTICTON—*Continued.*

| No. | Stations. | Intermediate distance. | Agents and Operators. | Position. | Salaries per month. | Date of appointment. | Memo. |
|---|---|---|---|---|---|---|---|
| | | Miles. | | | $ cts. | | |
| 52 | Lumby | 16 | H. Saddler | Agent | 5 00 | Mar. 30, 1914 | Branch line from Vernon 25 miles. |
| 53 | Shuswap Falls | 9 | F. Finlayson | " | Commission. | Dec., 1914 | |
| 54 | Rollings Lake | 1 | Rollings L. Land Co | " | " | " 1915 | |
| 55 | Falklands | 18 | Dr. White | " | " | Feb., 1915 | |
| 56 | Grande Prairie | 17 | E. W. Hoole | " | " | April, 1914 | Commission 20 p.c. |
| 57 | Holmwood | 14 | A. Duck | " | " | Nov., 1911 | |
| 58 | Barnes | 2 | Geo. Barnes | " | " | Jan., 1913 | |
| 59 | Ducks | 4 | G. Hemmingway | " | " | Dec., 1914 | |
| 60 | Pioneer Poultry Ranch Kamloops. | 5 | R. A. Barton | " | " | Oct., 1913 | |
| | | 181 | | | | | |

### NORTH THOMPSON SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 61 | Kamloops | | | Agent | Commission. | Jan., 1915 | Commission 20 p. c. |
| 61 | Anderson Ranch | 10 | H. E. Church | " | " | April 1914 | " " |
| 62 | Austins Ranch | 2 | J. R. Connors | " | " | Mar. 1914 | " " |
| 63 | Hefley Creek | 2 | H. McDaniels | " | " | Nov. 1908 | " " |
| 64 | Twenty-five Mile House | 11 | J. McCarten | " | " | 1914 | " " |
| 65 | Potters Flat | 4 | E. H. Jones | " | " | April 1914 | " " |
| 66 | Louis Creek | 7 | S. Armour | " | " | Mar. 1915 | " " |
| 67 | Barriere Power House | 3 | T. L. Reading | " | " | " 1913 | " " |
| 68 | Barriere P.O. | 3 | J. H. H. Nelson | " | " | April 1911 | " " |
| 69 | Borthwicks | 2 | Geo. Bortwick | " | " | June 1913 | " " |
| 70 | Geniers | 3 | Mrs. G. Genier | " | $25 Switching office | | " " |
| 71 | Chinook Cove | 2 | W. W. Elder | " | Commission. | | " " |
| 72 | Chu Chua | 12 | Geo. Fennell | " | " | | " " |
| 73 | Mount Olie | 7 | T. G. Kingscote | " | " | | " " |
| | Total | 68 | | | | | |

## KAMLOOPS—SAVONA SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Kamloops | 0 | | | Commission 20 % | | | |
| 74 | Iron Mask | 7 | E. G. Walbinder | Agent | " | .. | Aug. | 1914 |
| 75 | Cornwalls | 4 | Henry Cornwall | " | " | .. | Oct. | 1913 |
| 76 | Cherry Creek | 4 | B C. Fruit Lands Co., Ltd | " | " | .. | " | 1914 |
| 77 | Rowlands | 9 | D. W. Rowlands | " | " | .. | " | 1913 |
| 78 | Savonas | 2 | P. Margetts | " | " | .. | Nov. | 1914 |
| | | 26 | | | | | | |

## KAMLOOPS—ROSE HILL SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Kamloops | 0 | | | Commission. | | | |
| 79 | Daytons | 5 | Dayton Bros | Agent | 20 % | .. | June | 1914 |
| 80 | Baths | 1 | Géo. Bath | " | " | .. | Feb. | 1915 |
| 81 | Rose Hill | 1 | Angus McKay | " | " | .. | March | 1911 |
| 82 | Barnharts | 5 | P. A. Barnhart | " | " | .. | Jan. | 1911 |
| 83 | Barnhartvale | 2 | A. Holt | " | " | .. | May | 1914 |
| | | 14 | | | | | | |

## SHUSWAP—NOTCH HILL TO TAFT SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Kamloops | 0 | | | Commission. 20 % | | | |
| 84 | Ducks Range P.O. | 26 | Alex. Allen | Agent | " | .. | March | 1915 |
| 85 | Sinclairs | 5 | H. Sinclair | " | " | .. | " | 1915 |
| 86 | Martin Prairie | 5 | H. Brett | " | " | .. | " | 1915 |
| 87 | Pritchard | 3 | W. T. Pritchard | " | " | .. | " | 1915 |
| 88 | Shuswap | 10 | C. Byers | " | " | .. | " | 1915 |
| 89 | Chase | 3 | F. Bradley | " | " | .. | " | 1915 |
| 90 | Adams River Lbr Co | 1 | R. Barker | " | " | .. | " | 1915 |
| 91 | Adams Lake | 13 | F. Sturgill | " | " | .. | " | 1915 |
| 92 | Celestia | 14 | John Reilley | " | " | .. | " | 1915 |
| | | 80 | | | | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

## KAMLOOPS, OKANAGAN AND KOOTENAY LINES.

### SHUSWAP—NOTCH HILL TO TAFT SECTION.

| No. | Stations. | Intermediate distance. | Names. | Position. | Salary per month. | Date of appointment. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | Miles. | | | | | |
| 93 | Sorrento | 2 | F. Syson | Agent | Commission. | March, 1915 | Commission, 20 p. c. |
| 94 | Notch Hill | 3 | W. Chamberlain | " | " | " | " " |
| 95 | Tappen | 9 | H. C. Banks | " | " | " | " " |
| 96 | Salmon Arm | 11 | R. W. Holliday | " | $ 10.00 | " | Switching Office. |
| 97 | Enderby | 17 | H. A. Teece | " | Commission. | " | Commission, 20 p. c. |
| 98 | Grindrod | 6 | J. Monk | " | " | " | " " |
| 99 | Mara | 6 | E. Hine | " | " | " | " " |
| 100 | Sicamous | 13 | W. K. Finlayson | " | " | " | " " |
| 101 | Solsqua | 6 | F. Bossley | " | " | " | " " |
| 102 | Malakwa | 7 | M. Crawford | " | " | " | " " |
| 103 | Craigellachie | 5 | J. E. Paulding | " | " | " | " " |
| 104 | Taft | 5 | John Markshoin | " | " | " | " " |
| | | 90 | | | | | |

### FAIRVIEW TO MIDWAY SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Fairview | 0 | | | | | |
| 105 | Osoyoos | 16 | G. S. Jermyn | Agent | Commission. | March, 1915 | Commission, 20 p. c. |
| 106 | Oroville | 2 | L. R. Anderson | " | " | " | " " |
| 107 | Bridesville | 18 | Thos. Donald | " | " | " | " " |
| 108 | Rock Creek | 7 | T. R. Hanson | " | " | " | " " |
| 109 | Riverside | 1 | Rock Creek Trading Co. | " | " | " | " " |
| 110 | Midway | 12 | E. L. Salter | " | " | " | " " |
| 111 | Midway Customs House | | R. D. Kerr | " | " | " | " " |
| | | 56 | | | | | |

## WHITEMANS CREEK TO KELOWNA SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Kelowna | 0 | | | | | | |
| 112 | Bears Creek | 4 | H. C. Childers | Agent | Commission | March, 1915 | Commission, 20 p. c. | |
| 113 | Wilson Landing | 4 | H. C. Browse | " | " | " | " | " |
| 114 | Nahum | 6 | H. B Kinnard | " | " | " | " | " |
| 115 | Fintry | 6 | J. D. Godwin | " | " | " | " | " |
| 116 | Ewings | 3 | W. W. Calquhoun | " | " | " | " | " |
| 117 | Killiney | 2 | H. Hodges | " | " | " | " | " |
| 118 | Mabees | 1 | O. S. Mabee | " | " | " | " | " |
| 119 | Whitemans Creek | 4 | V. Willett | " | " | " | " | " |
| | | 30 | | | | | | |

## NELSON TO TRAIL SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 120 | Nelson | 0 | B.C. Tel. Co., Ltd | Agents | Commission | Feb., 1915 | |
| | Nelson | | P. Baird | Lineman | $8 80 00 | March 31, 1915 | Travelling expenses allowed when on repair trips. |
| 121 | Perriere Mine | 4 | C. E. Crossley | Agent | Commission | Feb., 1915 | Commission, 20 p. c. |
| 122 | Hall Siding | 7 | Mankin Lbr. & Pole Co. | " | " | " | " " |
| 123 | Yimir | 8 | G. S. Coleman | " | " | " | |
| 124 | Salmo | 9 | Salmo Trading Co. | " | " | " | |
| 125 | Erie | 4 | J. E. Ried | " | " | " | |
| 126 | Meadows | 2 | W. J. Wilson | " | " | " | |
| 127 | Fruitvale | 6 | W. R. Mellard | " | " | " | |
| 128 | Columbia Gardens | 7 | J. H. Hine | " | " | " | |
| 129 | Waneta | 5 | D. H. Galbraith | " | " | " | |
| 130 | Trail | 9 | B. C. Tel. Co. | " | " | " | |
| | | 61 | | | | | |

## PROCTOR TO SIDAR SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 131 | Proctor | 0 | G. Snow | Agent | Commission | Mar., 1915 | Commission 20% |
| 132 | Kootenay Bay | 5 | J. Low | " | " | " 1915 | " 20% |
| 133 | Crawford Bay | 9 | Mrs. H. Dee | " | " | " 1915 | " 20% |
| 134 | Crawford Bay Wharf | 1 | O. H. Burden | " | " | " 1915 | " 20% |
| 135 | Grays Creek | 4 | A. F. Lymbery | " | " | " 1915 | " 20% |
| 136 | Boswell | 16 | J. Coupland | " | " | " 1915 | " 20% |
| 137 | Kuskanook | 8 | C. Wright | " | " | " 1915 | " 20% |
| 138 | Sidar | 5 | T. Rodgers | " | " | " 1915 | " 20% |
| | | 48 | | | | | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### GOLDEN—WINDERMERE SECTION.

| No. | Stations. | Distance. | Name. | Position. | Salary. | Date of appointment. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | Miles. | | | $ cts. | | |
| 139 | Golden | | | | | | |
| | (Local Exchange) | | Miss R. E. Kenny | Agent | 65 00 | Nov., 1913 | |
| | | | D. Tennant | Operator | 35 00 | Mar., 1915 | |
| | | | E. J. Tennant | Lineman | 80 00 | " 1911 | And travelling expenses on repair work. |
| | | | Office Rent | Rent | 15 00 | | |
| 140 | Nicholsons | 6 | C. Nicholson | Agent | Commission | Mar., 1915 | Commission 20% |
| 141 | Canyon Creek | 3 | J. A. Habert | " | " | " 1912 | " 20% |
| 142 | Parsons | 15 | J. Hawkins | " | " | Apr., 1914 | " 20% |
| 143 | Spillamacheene | 18 | H. G. McDonald | " | " | Nov., 1912 | " 20% |
| 144 | Heffners Ldg | 1 | H. G. Low | " | " | " 1912 | " 20% |
| 145 | Allsup Ranch | 5 | W. P. Allsup | " | " | " 1912 | " 20% |
| 146 | Mitchell Ranch | 2 | A. H. Mitchell | " | " | " 1912 | " 20% |
| 147 | Brisco | 1 | H. Atchison | " | " | " 1908 | " 20% |
| 148 | Edgewater | 12 | Col. Valley Orchards Ltd | " | " | " 1913 | " 20% |
| 149 | Sinclair | 3 | J. Hartwig | " | " | Feb., 1915 | " 20% |
| 150 | Athalmer | 12 | M. H. Hope | " | 65 00 | Apr., 1912 | |
| | (Local Exchange) | | D. Turner | Operator | 35 00 | " 1915 | |
| | Office rent including | | Athalmer | Rent | 20 00 | Feb., 1915 | |
| | Windermere | 6 | | | | July, 1914 | |
| | and | | | | | | |
| | Wilmer | 3 | | | | " 1912 | |
| | Invermere | 1 | | | | " 1914 | |
| | | 88 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 151 | Nakusp | | L. J. Edwards | Agent | 50 00 | Dec., 1912 |
| 152 | McPhersons | 1 | Dr. McPherson | " | Commission | 1914 |
| 153 | Rock Island | 14 | D. A. Middlemass | " | " | Dec., 1912 |
| 154 | Arrow Park | 4 | A. E. Keefer | " | " | " 1912 |
| 155 | West Arrow Park | 1 | J. M. Scott | " | " | Mar., 1915 |
| 156 | Burton City | 5 | Robt. Stevens | " | " | Dec., 1912 |
| 157 | West Demars | 10 | A. L. May | " | " | Mar., 1915 |
| 158 | Fauquiers | 3 | F. G. Fauquier | " | " | Dec., 1912 |
| 159 | Needles | 2 | A. W. Lift | " | " | " 1912 |
| 160 | Edgewood | 13 | W. J. Banting | " | " | " 1912 |
| | | 53 | | | | |

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES.

### VICTORIA BAMFIELD SECTION.

| No. | Stations. | Intermediate Distance. | Name. | Position. | Salaries per month or Commission. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | Miles. | | | $ cts. | | |
| 1 | Victoria | 0 | Jas. McNeil | Agent | 95 00 | April 1st, 1911 | |
| | " | | Wm. Harker | Messenger | 35 00 | Oct. 1st, 1913 | |
| 2 | Luxton | 9 | F. E. Reid | Agent | 25 p. c. Commission. | Aug. 7th, 1914 | Vice J. H. Smith, resigned. |
| 3 | Gents | 8 | Sarah Gent | " | " " | June 1st, 1911 | |
| | " | | Aaron Gent | Lineman | 85 00 | April 1st, 1911 | |
| 4 | Coopers Cove | 1 | Sooke Wate works | Agent | Free | Jan. 1st, 1913 | Free Office. |
| 5 | Sooke | ½ | Isabella Milne | " | 50 00 | Sept. 1st, 1913 | Office Rental $5.00 per month from Sept. 1, 1913. |
| 6 | Rocky Point | 14 | Thos. Parker | " | 25 p. c. Commission | Nov.13th, 1914 | |
| 7 | Otter Point | 6 | Mrs. K. Gordon | " | 50 00 | Oct. 1st, 1908 | |
| 8 | Jordan River | 14 | Mrs. C. McVicar | " | 25 p. c. Commission | " " 1911 | |
| | " " | | J. N. McVicar | Lineman | 85 00 | June 1st, 1909 | |
| 9 | Slide Hill | 14 | D. H. Soule | " | 85 00 | Feb. 1st, 1911 | |
| 10 | Port Renfrew | 14 | A. M. Falconer | Agent | 80 00 | April 1st, 1914 | Vice E. C. Williams and W. A. McGee, resigned. |
| | " | | T. M. Baird | Lineman | 85 00 | Nov. 1st, 1908 | |
| 11 | Camp Bay | 17 | A. McLennan | " | 85 00 | Aug. 1st, 1911 | |
| 12 | Carmanah | | Edward Arnold | " | 85 00 | June 1st, 1912 | Transferred from Clo-oose. |
| 13 | Clo-oose | 15 | Miss C. Logan | Agent | 25 p. c. Commission | Jan. 1st, 1913 | |
| | " | | David Logan | Lineman | 85 00 | April 1st, 1898 | |
| 14 | Pachena | 15 | Wireless office | | | | Cut in for test station. |
| 15 | Bamfield | 15 | G. M. Ross | Agent | 90 00 | Sept.18th, 1914 | Vice H. W. Ragbourn. |
| | " | | W. B. Monette | Lineman | 85 00 | Nov.23rd, 1913 | |
| | Sooke Exchange | 22 | | | | | |
| | *Victoria.* | | | | | | |
| | Wir less Station | 4 | Accom'dation office | | | | |
| | Prov. Govt. Bldgs | ½ | A. E. Starr | Agent | 25 p. c. Commission | Nov.27th, 1914 | |
| | | 169 | | | | | |

Phones have been installed on this line for the use of Pachena Lighthouse, Life Saving Patrol Hut Tsusiat and Seven Mile River (latter two places for the winter months only); Agent Mrs. Gordon, Otter Point; Lineman McVicar, Jordan River; Lineman Soule, Slide Hill; Lineman Baird, Port Renfrew, Lineman McLennan, Camp Bay; Lighthouse Carmanah; Avent Falconer, Port Renfrew, Lineman Arnold, Carmanah; Agent Logan, Clo-oose; Lineman's Shelter hut; Agent Ross, Bamfield, Life Saving Station, Bamfield, Lighthouse, Cape Beale, (latter on line maintained by Marine and Fisheries Department.)

Lineman Gent looks after the main line, Victoria to and including Sooke: also Rocky Point line.

## ALBERNI-BAMFIELD SECTION.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16 | Alberni | 0 | Mrs. P. A. Haslam | Agent | 65 00 | Dec. 1, 1902 | $5 per month allowed for office rent. |
| 17 | Port Alberni | 2 | E. B. Garrard | " | 80 00 | April 1, 1911 | |
| | " " | | G. A. Bellamy | Lineman | 85 00 | May 1, 1913 | |
| 18 | Bamfield | 51 | G. M. Ross | Agent | 90 00 | Sept. 18, 1914 | Vice H. W. Ragbourn |
| | " | | J. B. McKay | Lineman | 85 00 | April 1, 1911 | |
| | | 53 | | | | | |

(Branch line to Cape Beale from Bamfield, also to Life Saving Station, Bamfield, transferred to Marine and Fisheries Dept., as the line is entirely for their service.)

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES—*Continued.*

### ALBERNI-CLAYOQUOT SECTION.

| No. | Stations. | Intermediate Distance. Land lines. | Intermediate Distance. Cable. | Name. | Position. | Salaries. $ cts. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| 19 | Port Alberni | 2 | | E. B. Garrard | Agent | 80 00 | April 1, 1911 | |
| | " " | | | J. B. McKay | Lineman | 85 00 | April 1, 1911 | |
| 20 | Franklin Creek | 6¾ | 1¼ | | | | | Line crosses Alberni Canal here by submarine cable. |
| 21 | Uchucklesit | 23 | | J. W. Barnes | Agent and lineman | 80 00 | Dec. 16, 1913 | |
| 22 | Toquart | 9 | | J. E. Hillier | " " " | 85 00 | Nov. 16, 1908 | Government own office building occupied as residence. |
| 23 | Uchulet | 24¼ | | H. J. Hillier | " " " | 80 00 | Dec. 1, 1902 | $8.50 per month allowed for rent. |
| 24 | Long Beach | | | Accommodation office | | | | Point of connection from Main lines to branch lines. |
| 25 | Tofino | 30½ | | F. C. Garrard | Agent and lineman | 80 00 | April 1, 1911 | |
| 26 | Clayoquot | | 1 | F. L. Bussa. | Agent | 80 00 | Feb. 22, 1915 | Vice J. C. Barbour, service dispensed with. |
| | | 95¼ | 2¼ | | | | | |

### CLAYOQUOT—NOOTKA SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Clayoquot | 0 | 0 | F. L. Bussa. | Agent | 80 00 | Feb. 22, 1915 | Vice J. C. Barbour, services dispensed with. |
| 27 | Vargas Island | 6 | 1 | Miss E. M. Abraham. | Agent | 25 p. c. commission | Nov. 18, 1914 | |
| 28 | Ahousat | 3 | 4 | W. C. Hamilton | Agent and lineman | 85 00 | July 1, 1911 | |
| 29 | Hesquiat | 26 | 2 | Rev. Chas. Moser. | Agent | 25 p. c. commission | Aug. 1, 1914 | |
| 30 | Estevan | 6¾ | 2¼ | A. C. Cole | Agent and lineman | 85 00 | April 1, 1914 | |
| 31 | Nootka (Friendly Cove) | 19 | 3 | F. T. Gardhouse. | Agent | 25 p. c. commission | Aug. 7, 1914 | |
| | *Clayoquot Branch.* | | | | | | | |
| | Clayoquot | 0 | 0 | F. L. Bussa. | Agent | 80 00 | Feb. 22, 1915 | Vice J. C. Barbour, services dispensed with. |
| 32 | Oppitsat | 0 | ½ | Rev. Fr. Lemens. | " | Free | Oct. 1, 1914 | Free office. |
| 33 | Kakawis | 1 | 0 | Rev. Fr. Epper | " | 25 p. c. commission | July 29, 1914 | |
| | | 61¾ | 12¾ | | | | | |

TOQUART—SECHART SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 34 | Toquart | 0 | | J. E. Hillier | Agent and lineman | | | |
| 35 | Sechart | 7½ | 2 | Accommodation Office. | | | | |
| | *Tofino—Mosquito Harbour.* | | | | | | | |
| 36 | Tofino | 0 | | F. C. Garrard | Agent and lineman | | | |
| 37 | Mosquito Harbour | 9½ | 1 | Accommodation Office | | | | Lumber and logging firm. |
| | *Tofino—Clayoquot Sound.* | | | | | | | |
| | Tofino | 0 | | F. C. Gerrard | Agent and lineman | | | |
| 38 | Clayoquot Sound | 10½ | 1 | Accommodation Office | | | | Clayoquot Sound Canning Co. |
| | *Tofino—Leonard Island Light.* | | | | | | | |
| | Tofino | 0 | | F. C. Garrard | Agent and lineman | | | |
| 39 | Leonard Island Light | | 1½ | Accommodation Office | | | | For Marine and Fish. Dept. |

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES—*Continued.*

### NANAIMO—COMOX-CAMPBELL RIVER SECTION.

| No. | Stations. | Intermediate Distance. | Name. | Position. | Salaries. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | | | $ cts. | | |
| 40 | Nanaimo | | M. S. Stephens | Agent | 100 00 | Nov. 1, 1913 | |
| | " | | H. W. Spencer | Messenger | 35 00 | Mar. 20, 1911 | |
| 41 | Wellington | 5 | D. R. Nickerson | Agent | 25 p. c. commission | Jan. 1, 1915 | Vice H. R. Parker, resigned. |
| 42 | Parksville | 23 | R. A. Gooding | " | 90 00 | Jan. 9, 1915 | Vice L. H. Bradbury, resigned, also F. S. Clark, dismissed. |
| | " | | Wm. Mills | Lineman | 85 00 | June 1, 1903 | |
| 43 | Union Bay | 29 | Fred Brown | Agent | 80 00 | Dec. 16, 1913 | |
| | " | | Thos. Hudson | Lineman | 100 00 | Nov. 17, 1908 | |
| 44 | Cumberland | 10 | W. E. Spencer | Agent | 80 00 | May 17, 1914 | Vice T. Thorne, dismissed. |
| 45 | Courtenay | 7 | John Aitken | " | 80 00 | Feb. 1, 1912 | |
| 46 | Comox | 8 | Mrs. M. Smith | " | 65 00 | Sept. 1, 1911 | $5 per month allowed for office rent. |
| 47 | Oyster River | 32 | Miss B. Woodhus | " | 25 p. c. commission | April 1, 1909 | |
| | " | | Mark Coe | Lineman | 90 00 | Feb. 1, 1910 | |
| 48 | Campbell River | 4 | Jas. Lipscombe | " | 90 00 | Oct. 1, 1911 | Vice W. J. Ruth transferred to Vancouver. |
| | | 118 | | | | | |

NANAIMO—COMOX-CAMPBELL RIVER SECTION.—*Concluded.*

| No. | Stations. | Intermediate Distance. | | Name. | Position. | Salaries. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| | | Land Lines. | Cable. | | | $ cts. | | |
| | *Branches.* | | | | | | | |
| | *Parksville-Alberni.* | | | | | | | |
| 49 | Parksville | 0 | | R. A. Gooding | Agent | | | |
| | " | | | Thos. Hirst | Lineman | 85 00 | Feb. 4, 1911 | |
| 50 | Alberni | 30 | | Mrs. P. A. Haslan | Agent | | | |
| | " | | | A. A. Lynn | Lineman | 85 00 | April 1, 1912 | |
| | *Comox-Cape Lazo.* | | | | | | | |
| | Comox | 0 | | Mrs. M. Smith | Agent | | | |
| 51 | Cape Lazo | 6 | | Gov't. Wireless | Operator | | | To give connection to Wireless station line locally repaired. |
| | *Union Bay-Denman & Hornby Island.* | | | | | | | |
| 52 | Cable Landing | 0 | | Fred. Brown | Agent | 25 p.c. commission | | |
| 53 | North Denman Island | 7 | 1 | Wesley Piercy | " | " " | Feb. 1, 1908 | |
| 54 | South Denman Island | 5½ | | Thos. Chalmers | " | " " | Feb. 1, 1908 | |
| 55 | South Hornby Island | 1½ | 1 | Thos. Smith | " | " " | Feb. 1, 1908 | |
| 56 | North Hornby Island | 9 | | Geo. Howe | " | " " | June 15, 1912 | |

All salaries on this line were increased to present rating on June 1st., 1913.

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES—*Continued.*

### NANAIMO—GABRIOLA ISLAND SECTION.

| No. | Stations. | Intermediate Distance. | | Name. | Position. | Salaries. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| | | Land Lines. | Cable. | | | $ cts. | | |
| | Nanaimo | 0 | | B.C. Telephone Co | Agents | 25 p.c. commission. | Feb. 1, 1909 | |
| 57 | " Govt. office | 0 | | M. S. Stephens | Agent | | | |
| 58 | " River | 5¼ | | J. Gordon | " | 25 p.c. commission. | Feb. 1, 1909 | |
| 59 | North Gabriola Island | 1 | ¾ | R. Hoggan | " | 25 p.c. " | Oct. 1, 1910 | |
| 60 | Centre " " | | | Closed. | | | | |
| 61 | Shaws | | | Mrs. W. N. Shaw. | Agent | 25 p.c. " | June 1, 1912 | |
| 62 | South Gabriola | 12 | | J. Degnen | " | 25 p.c. " | Feb. 1, 1909 | |
| | | 18¼ | ¾ | | | | | |

### CAMPBELL RIVER—POWELL RIVER SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Campbell River | 0 | | Jas. Liscombe | Agent | | | |
| 63 | Quathiaski Cove | 2 | 1 | W. E. Anderson | " | 25 p.c. commission. | Nov. 1, 1910 | |
| 64 | Heriot Bay | 6½ | | H. A. Bull | " | 25 p.c. " | Nov. 1, 1910 | |
| 65 | Bagots | 1½ | | T. H. Bagot | " | 25 p.c. " | Jan. 1, 1913 | |
| 66 | Mary Island | 5 | 3 | Wm. Milne | " | 25 p.c. " | Oct. 1, 1912 | |
| 67 | Cortez Island | 9 | 1 | Wm. Manson | " | 25 p.c. " | Nov. 1, 1910 | |
| 68 | Lund (Mainland) | 14 | 3 | W. W. Trotter | " Lineman | 85 00 | June 23, 1914 | Vice J. C. Fraser, resigned. |
| 69 | Sliammon | 12 | | B. Nicholson | Agent | 25 p.c. commission. | May 17, 1914 | |
| 70 | Powell River | 3 | | R. H. Wendeborn. | " | 85 00 | Oct. 1, 1913 | Vice W. E. Spencer, transferred. |
| | " " | | | Jas. McGowan | Lineman | 95 00 | Dec. 1, 1914 | |
| 71 | Blubber bay | | 5½ | J. B. Fry | " | 25 p.c. commission. | Feb. 10, 1911 | |
| 72 | Van Anda | 6 | | A. G. Deighton | Agent and lineman | 25 p.c. " | Feb. 10, 1911 | |
| | | 58¾ | 13½ | | | | | |

Land line on Valdez Island repaired by T. H. Bagot and paid only for time occupied executing repairs.
" Mary Island " W. Milne " "
" Cortez Island " J. Hamarech " "
" Taxada Island " A. G. Deighton " "

## SALT SPRING ISLAND TELEPHONE LINE.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Duncan | 0 | | Miss M. Robertson | Agent | 65 00 | Mar. 1, 1912 | Now in public building. |
| 2 | Maple Bay | 9 | | Closed | | | | |
| 3 | Chisholm | 3¾ | | " | | | | |
| 4 | Sansun Narrows | | 3 | J. Noury | Agent | 25 p.c. commission. | May 1, 1914 | Cable crosses here. |
| 5 | Trenches | 3 | | C. N. Trench | Subscriber | | Mar. 1, 1912 | |
| 6 | South Salt Spring | 4 | | R. P. Edwards | Agent | 25 p.c. commission. | Dec. 1, 1912 | |
| 7 | Bridgemans | 6½ | | A. J. W. Bridgeman | " | | " 1, 1912 | Free office. |
| 8 | Fulford Harbour | | | C. M. Blandy | " | 25 p.c. commission. | July 1, 1908 | |
| 9 | Cushion Cove | 3 | | Bullman Lbr. Co. | " | Free | Sept. 1, 1911 | " |
| 10 | Horels | 2 | | James Horel | " | 25 p.c. commission. | " 1, 1911 | |
| 11 | Beechs | | | Dr. Allen Beech | Subscriber | | July 1, 1905 | Merged into Ganges, Nov. 12, 1914. |
| 12 | Ganges Harbour | 6 | | Miss M. E. Hughes | Agent | 50 00. | Nov. 11, 1914 | Vice G. J. Mouat, resigned. |
| 13 | Henry | | | John Henry | " | 25 p.c. commission. | " 15, 1914 | |
| 14 | Bedwell Harbour | 2½ | | Mrs. A. R. Spalding | " | 25 p.c. " | Oct. 1, 1908 | Cable crosses here. |
| 15 | South Pender | 1½ | | L. S. Higgs | " | 25 p.c. " | May 1, 1913 | |
| 16 | Aldridges | 3½ | | A. H. Aldridge | Subscriber | | " 1, 1913 | |
| 17 | Browning Harbour | 3 | | W. Brackett | Agent | 25 p.c. commission. | Jan. 1, 1908 | |
| 18 | Hope Bay | 2½ | | J. W. Corbett | " | 25 p.c. " | Oct. 1, 1911 | |
| 19 | Clam Bay | 2 | | A. Davidson | " | 25 p.c. " | June 1, 1913 | |
| 20 | Port Washington | 2 | | S. Percival | " | 25 p.c. " | " 1, 1914 | Vice C. A. Gaunt, resigned. |
| 21 | Village Bay | 4 | 1 | A. Deacon | " | 25 p.c. " | Dec. 1, 1908 | |
| 22 | Mayne Island Hotel | 2½ | | C. J. McDonald | " | 25 p.c. " | " 1, 1908 | |
| 23 | Active Pass Light | ¼ | 1¼ | Geo. Georgeson | " | 25 p.c. " | " 1, 1908 | |
| 24 | Galiano Island | 1 | 2 | Burrill Bros. | " | 25 p.c. " | " 1, 1908 | |
| | | 62 | 7¼ | | | | | |
| | Ganges ex | 24 | | | | | | |

Subscribers pay $36 yearly rental and regular tariff.
Repairs made to land lines on the various sections as under; only actual time occupied in making repairs paid for.
Duncan to Sansun Narrows, J. Noury, sen.; Salt Spring Island, Jas. Horel; Pender Island, W. Brackett; Mayne Island, A. Deacon; Galiano Island, Burrill Bros.
All salaries on this line increased to present rating on June 1, 1913.
Telephone Exchange, Ganges, opened November 11, 1914, with 33 subscribers, who pay $24 per annum.

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES—*Continued.*

### SIDNEY—GANGES TELEPHONE LINE.

| No. | Stations. | Intermediate Distance. Land lines. | Intermediate Distance. Cable. | Name. | Position. | Salaries. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | |
| 1 | Sidney | 0 | 0 | B.C. Telephone Co | Agents | 25 p.c. | July 1, 1910 | |
| 2 | Fulford Harbour | 12 | 2½ | G. M. Blandy | " | 25 p.c. | July 1, 1910 | |
| 3 | Ganges | 9 | 0 | Miss M. E. Hughes | " | 25 p.c. | July 1, 1910 | |
| | | 21 | 2½ | | | | | |

### POWELL RIVER—VANCOUVER SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Powell River | 0 | | R. H. Wendeborn | Agent | 85 00 | July 29, 1914 | Vice W. E. Spencer, transferred. |
| 2 | Wolfson Bay | 15 | | Mrs. John Fay | " | 25 p.c. commission. | Mar. 1, 1915 | Vice W. Peterson and C. A. Pendleton, resigned. |
| 3 | Stillwater | 3 | | J. H. Brownrigg | " | 25 p.c. " | May 17, 1913 | |
| 4 | Hardy Island | 3½ | 2½ | H. R. Nickson | " | 25 p.c. " | Feb. 19, 1915 | Vice W. W. Wood and H. E. Williams, resigned. |
| 5 | Nelson Island | 5¾ | 1¼ | Rod McKay | Lineman | 85 00 | Nov. 1, 1913 | |
| 6 | Pender Harbour | 3¾ | ¾ | Theo. Dames | Agent | 25 p.c. commission. | July 15, 1913 | |
| | " " | | 1 | E. J. Meyerr | Lineman | Apr. 28, 1913 | | |
| 7 | Bargain Harbour | 6 | | (T. F. Foley) closed | Agent | 25 p.c. commission | Closed | |
| 8 | Half Moon Bay | 11½ | | Mrs. C. Lyell | " | 25 p.c. " | May 17, 1913 | Formerly Welcome Pass. |
| 9 | Buccaneer Bay | 6 | | W. C. Birdsall | " | 25 p.c. " | Mar. 19, 1915 | |
| 10 | North West Bay | 4 | | C. C. Hunt | " | 25 p.c. " | July 15, 1913 | |
| 11 | Sechelt | 6 | | Thos. Snodgrass | " lineman | 85 00 | Sept. 8, 1914 | Vice Bradbury, transferred. |
| | " | | | H. P. Large | Lineman | 85 00 | " 7, 1914 | Vice Snodgrass, promoted. |
| 12 | Gibsons Landing | 15 | | W. W. Winn | Agent | 25 p.c. commission. | May 15, 1913 | |
| 13 | Keats Islands | | 1 | H. Brown | " | 25 p.c. " | " 1, 1913 | |
| 14 | Tunstall Bay | | 3½ | R. Davidson | " | 25 p.c. " | " 17, 1913 | |
| 15 | Bowen Is. (Snug Cove) | 5½ | | J. A. Fulton | " | 85 00 | Apr. 1, 1914 | Vice A. M. Falconer, transferred. |
| 16 | White Cliff | | 2 | Cable Landing | | | | |
| 17 | North Vancouver | 15½ | | Mrs. E. C. Williams | Agent | 65 00 | Feb. 20, 1914 | Vice R. H. Wendeborn, transferred. |
| | " " | | | P. T. Cousins | Lineman | 95 00 | May 1, 1913 | |
| 18 | Vancouver | 4 | 1 | W. J. Ruth | Manager | 100 00 | Sept. 18, 1914 | Vice G. M. Ross, transferred. |
| | " | | | Douglas Slocombe | Clerk | 55 00 | June 24, 1913 | |
| | " | | | Lawrence Bain | Messenger | 35 00 | July 1, 1914 | |
| | " | | | John Smith | " | 35 00 | June 12, 1914 | |
| | | 104½ | 12 | | | | | |

Land line on Hardy Island repaired by Agent Nickson and paid only for time occupied executing repairs.
" Keats Island " " Brown " "
" Bowen Island " " Fulton " "

## CAMPBELL RIVER—HARDY BAY SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Campbell River | 0 | | Jas. Lipscombe | Agent | | | |
| 2 | Rock Bay | 27 | 1 | Wm. Struthers | " | 25 p.c. commission | Jan. 26, 1915 | |
| 3 | Sayward | 23 | | H. Otto Sacht | " | 25 p.c. " | Mch. 27, 1915 | |
| 4 | Beaver Cove | 48 | 1½ | Agent to be app. | | | | |
| | " | | | E. H. Olney | Lineman | 85 00 | Feb. 13, 1915 | |
| 5 | Alert Bay | 10 | | R. C. Dundas | Agent | 10 00 | Feb. 1, 1914 | |
| 6 | Suquash | 13 | | M. Wearing | " | Free | Aug. 11, 1914 | Free Office. |
| 7 | Fort Rupert | 15 | | H. T. Cadwallader | " | 25 p.c. commission | Mch. 26, 1915 | |
| 8 | Port Hardy | 3 | | Agent to be app. | | | | |
| 9 | Coal Harbour | 13 | 2 | Thos. Sorenson | Agent | 25 p.c. " | Feb. 20, 1915 | |
| 10 | Quatsino | | | O. A. Sherberg | " | 25 p.c. " | Mch. 31, 1915 | |
| | " | | | Thos. Ilstad | Lineman | 85.00 | Mch. 31, 1915 | |
| 11 | Holberg | 22 | | Agent to be app. | | | | |
| 12 | San Josef Bay | 15 | | " " | | | | |
| 13 | Fisherman Bay | 9 | | " " | | | | |
| | | 198 | 4½ | | | | | |

## VANCOUVER—SQUAMISH (NEWPORT) SECTION.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | North Vancouver | 0 | | Mrs. E. C. Williams | Agent | | | |
| 1 | Eagle Harbour | 10 | | T. R. Nixon | " | Free | May 17, 1913 | |
| 2 | Whenstone Quarry | | | W. Evison | " | | | |
| 3 | Porteau | 17 | | F. D. Wilson | Agent Lineman | 95.00 | Oct. 6, 1913 | |
| 4 | Britannia Beach | 7 | | E. J. Donahue | Agent | 25 p.c. commission | Mch. 4, 1914 | |
| 5 | Squamish (Newport) | 7½ | | E. S. Reeve | " | 95 00 | Oct. 1, 1913 | Formerly Newport. |
| | | 41⅓ | | | | | | |

## SIDNEY AND SIDNEY ISLAND TELEPHONE LINE.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Sidney | 0 | | B. C. Telephone Co | Agents | 25 p.c. commission | July 1, 1910 | |
| 2 | Sidney Island | 3 | 3 | S. I. Brick & Tile Co | " | 25 p.c. " | June 1, 1912 | |
| | | 3 | 3 | | | | | |

## BAMBERTON WORKS—KEATING'S BRANCH.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Bamberton Works | 1 | 1 | A. H. Anderson | Agent | Free | | Connected with B. C. Telephone Co |

## GOVERNMENT TELEGRAPH SERVICE—VANCOUVER ISLAND LINES—*Concluded.*

### CHEMAINUS, KUPER-THETIS ISLAND LINE.

| No. | Stations. | Intermediate Distance. Land. | Intermediate Distance. Cable. | Name. | Position. | Salaries. | Date of Appointment. | Remarks. |
|---|---|---|---|---|---|---|---|---|
| 1 | Chemainus | 0 | 0 | B. C. Telephone Co | Agents | 25 p.c. commission. | June 1, 1912 | |
| 2 | Kuper Island | | 1 | Rev. W. Lemmens | Agent | 25 p.c. " | Sept. 1, 1913 | |
| 3 | Thetis Island | 1 | | A. W. Bar. Foote. | " | | May 1, 1914 | Subscription. |
| 4 | Burehalls | 1½ | | A. D. Jansen | " | Free | June 1, 1912 | |
| 5 | Overbury | ¾ | | Hoffman & Hunt | " | Free | June 1, 1912 | |
| 6 | Heneages | ¾ | | A. Heneage | " | | Oct. 1, 1912 | |
| | | 3½ | 4 | | | | | |

### SAANICHTON—JAMES ISLAND LINE.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Keatings | 0 | 0 | B. C. Telephone Co | Agents | 25 p.c. commission | Dec. 23, 1913 | |
| 2 | James Island | 3½ | 1 | G. C. Grubb | Agent | Free | Dec. 7, 1914 | |
| | | 3½ | 1 | | | | | |

### TOFINO—BEAR RIVER LINE.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | Tofino | 0 | 0 | | | | | |
| 2 | Mosquito Harbour | 10½ | 0 | | | | | |
| 3 | Kalappa Mines | 4 | | | | | | |
| 4 | Raee Narrows | ½ | ¼ | Cable crosses here. | | | | |
| 5 | Bear River | 10½ | | | | | | |
| | | 25½ | ¼ | | | | | |

### DISTRICT SUPERINTENDENT'S STAFF.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Wm. Dee | Dist. Supt | 120.00 | Sept. 1, 1913 | |
| | | | | A. V. Porter | Line Foreman | 110.00 | June 1, 1911 | |
| | | | | H. Ward | | 4.00 per day | June 1, 1912 | Now temporary Inspector. |
| | | | | E. Brammer | Clerk | 100 00 | Sept. 1, 1914 | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### YUKON LINE.

| Stations. | Inter-mediate Distance. | Position. | Salaries per Month. | Tariff from Ashcroft. | Night Rate. | Memo. |
|---|---|---|---|---|---|---|
| | Miles. | | $ cts. | | | |
| Vancouver | | J. T. Phelan, superintendent | 233 33 | | | |
| | | Chas. Belleau, clerk | 85 00 | | | |
| | | P. R. Quain, clerk | 125 00 | | | |
| | | E. M. Keays, clerk | 100 00 | | | |
| | | M. H. Wood, stenographer | 60 00 | | | |
| Ashcroft | | C. Gooding, district supt | 175 00 | | | (40 p.c. of salary paid by C.P.R.) |
| | | W. B. French, manager | 125 00 | | | " " |
| | | R. D. Davies, day operator | 85 00 | | | " " |
| | | W. H. Lawson, day operater | 85 00 | | | " " |
| | | J. M. Kelly, night operator | 90 00 | | | |
| | | L. M. Evans, clerk | 60 00 | | | |
| | | C. Gooding, bookeeper | 60 00 | | | |
| Doherty's Ranch | 24 | Commission office | 25 p.c. | | | |
| Lillooet Branch— | | | | | | |
| Pavilion | 21 | " | 50 p.c. T.L. tolls | 50 & 3 | 30 & 2 | |
| Lillooet | 22 | W. H. Lawson | 85 00 | " | " | $5 per month for rent, fuel and light. |
| Lillooet — Pioneer Mines Branch— | | | | | | |
| Coronation | | Commission office | | | | |
| Fairhaven | | " | | | | |
| Mission Landing | | " | | | | |
| Seton Lake | | " | | | | |
| Tyanghton | | " | | | | |
| Dunlop | | Accommodation office | | | | |
| Main Line— | | | | | | |
| Dougherty's * | 24 | Commission office | 25 p.c. T.L. tolls | 25 & 2 | 25 & 1 | $5 per month for rent, fuel and light. |
| Clinton | 10 | E. LeBourdais, opr. & lineman | 60 00 | " | " | |
| 59 Mile House * | 12 | Commission office | 25 p.c. T.L. tolls | " | " | |
| 70 " * | 11 | " | " | " | " | |
| 83 " * | 13 | " | " | " | " | |
| 100 " * | 17 | " | " | " | " | |
| 105 " * | 5 | " | " | " | " | |
| 108 " | 3 | " | " | " | " | |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### YUKON LINE—*Continued.*

| Stations. | Intermediate Distance. | Position. | Salaries, per Month. | Tariff from Ashcroft. | Night Rate | Memo. |
|---|---|---|---|---|---|---|
| | Miles. | | $ cts. | | | |
| 115 Mile House | 7 | J. Foster, opr. and lineman | 95 00 | 25 & 2 | 25 & 1 | |
| 122 " * | 7 | Commission office | " | " | " | |
| 141 " * | 7 | " | 25 p.c. T.L. tolls | " | " | |
| 150 " | 9 | J. B. Rutledge, opr. and f'man | 85 00 | " | " | $5 per month for rent, fuel and light. |
| 158 " | 8 | A. G. Rutledge, asst. and m g'r. | 30 00 | 50 & 3 | 30 & 2 | |
| Bella Coola Branch— | | | | | | |
| 150 Mile House | 0 | See Main Line | | | | |
| Williams Lake | 6 | Commission office | 25 p. c | | | |
| Onward Ranch | 2 | " | " | | | |
| Borland's | 9 | " | " | | | |
| Four Mile Creek | 12 | " | " | | | |
| Bechers | 16 | " | " | | | |
| Hanceville | 28 | " | " | | | |
| Lees | 4 | " | " | | | |
| Alexis Creek | 13 | " | " | | | |
| Baylifts | 19 | " | " | | | |
| Chilanco Forks | 32 | " | " | | | |
| Tatla Lake | 32 | R. M. Spaulding, operator | 75 00 | | | |
| Kluna Kluna | 13 | R. B. Demorest, operator | 75 00 | | | |
| Lowneses | 31 | Commission office | 25 p. c | | | |
| Marvins | 55 | " | " | | | |
| Atnarko | 7 | E. H. Edwards, lineman | 75 00 | | | |
| Canoe Crossing | 25 | Commission office | 25 p. c | | | |
| Bella Coola | 25 | Oscar Landry, operator | 110 00 | | | |
| Horsefly Branch— | | | | | | |
| Harpers Camp | 33 | H. C. Watters, opr. & f'man | 70 00 | 50 & 3 | 30 & 2 | $5 per month for rent, fuel and light. |
| Quesnel Forks | 31 | Grant Grinder, opr. & lineman | 75 00 | " | " | " " " |
| Hydraulic | 25 | Commission office | 50 p. c. T. L. tolls | " | " | |
| 158 Mile House * | 8 | " | 25 p. c. T. L. tolls | " | " | |
| Lynes * | 11 | " | " | " | " | |
| Soda Creek | 9 | R. D. Lang, opr. & lineman | 95 00 | " | " | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Packards | 7 | Commission office | 25 p. c. | T. L. tolls | " | " |
| Rowcds | 12 | " | | " | " | " |
| Anders | 4 | " | | " | " | " |
| Moffats | 5 | " | | " | " | " |
| Windt's | 4 | " | | " | " | " |
| Yorsons | 3 | " | | " | " | " |
| Shepherds | 7 | " | | " | " | " |
| Quesnel | 14 | L. LeBourdais, operator | | 95 00 | " | " House, fuel and light, free. |
| | | Kate Le Bourdais, messenger | | 30 00 | | |
| Barkerville Branch— | | | | | | |
| Lafontaine | | Commission office | 25 p.c. | T. L. tolls | | |
| Lockes | 13 | " | | " | " | |
| Cottonwood | 8 | " | | " | " | |
| Wing Dam | 10 | " | | " | " | |
| Stanley | 14 | " | | " | " | |
| Barkerville | 16 | J. E. Murphy, opr. & lineman | | 75 00 | | House, fuel and light, free. |
| Blackwater | 42 | D. Mitchell, operator | | 75 00 | 75 & 5 | Provisions supplied. |
| | | W. A. Knowles | | 70 00 | | " " |
| Bobtail Lake | 37 | L. R. Seldon, operator | | 75 00 | 75 & 5 | " " |
| Nechaco | 32 | A. Ferland, operator | | 75 00 | 75 & 5 | " " |
| Fort Fraser | 21 | S. G. Laurence | | 75 00 | 75 & 5 | $1 per day, board allowance. |
| | | H. Worthington, lineman | | 70 00 | | " " |
| Stella | | H. LeDuke, operator | | 75 00 | | |
| Burns Lake | 55 | J. McEverly, operator | | 75 00 | 1 00 & 7 | Provisions supplied. |
| | | W. A. Gow, lineman | | 70 00 | | " " |
| Bulkley Summit | | Commission office | | | | |
| South Bulkley | 27 | W. Mitchell, operator | | 75 00 | 1 00 & 7 | " " |
| | | W. N. Clark, lineman | | 70 00 | | " " |
| Aldermere | 52 | E. G. Aylliffe, operator | | 75 00 | 1 25 & 10 | " " |
| | | Henry Fink, l'man, Aldermere | | 70 00 | | |
| Telkwa | 2 | J. E. Lima | | 75 00 | 1 25 & 10 | " " |
| Smithers | | R. Barker | | 75 00 | | |
| Moricetown | 28 | John Muir, operator | | 75 00 | 1 25 & 10 | " " |
| Hazelton | 28 | E. R. Cox, local manager | | 110 00 | 1 00 & 7 | $1 per day, board allowance. |
| | | J. E. Germain, night operator | | 100 00 | | " " |
| | | G. W. McKay, day operator | | 85 00 | | " " |
| | | R. O. Fulton, operator and clerk | | 85 00 | | |
| | | R. O'Brien, messenger and clerk | | 100 00 | | |
| | | W. Blackstock, lineman | | 75 00 | | |
| Hazelton and Prince Rupert Branch— | | | | | | |
| New Hazelton | 4 | Ed. Noble, opr. & l'man | | 75 00 | 1 00 & 7 | $25 per month, board allowance. |
| Kitwanger | 16 | E. H. Fagerlund, opr. & l'man | | 75 00 | 1 25 & 10 | " " |
| Bo-troms' | 14 | C. S. Fuller, opr. and lineman | | 75 00 | " | " " |
| Cedarvale | 7 | Commission office | 25 p.c. | T.L. toll- | " | |
| McHugh's | 3 | H. P. Large, opr. and lineman | | 75 00 | | " " |
| Lorne Creek | 10 | A. J. Morrison, opr. and l'man | | 75 00 | " | " " |
| Pacific | | S. W. Dobbie, operator | | 75 00 | | |
| Nicholl— | 10 | J. C. Overbeck, " | | 75 00 | " | " " |
| Hardscrabble | 10 | H. S. Cunningham, opr. & l'man | | 75 00 | " | " " |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### YUKON LINE—*Continued.*

| Stations. | Intermediate Distance. | Position. | Salaries per Month. | Tariff from Ashcroft. | Night Rate. | Memo. |
|---|---|---|---|---|---|---|
| Nicholl—*Con.* | Miles. | | $ cts. | | | |
| Kitselas | 10 | C. W. Bingham, opr. & l'man.. | 80 00 | 1 25 & 10 | ..... | $25 per month, board allowance. |
| Copper River | 7 | Commission office. | 25 p.c. T.L. tolls | 1 50 & 10 | | |
| Kitsum Kalum | 8 | M. R. Grimes, operator | 75 00 | " | ..... | " " |
| | | George Minchin, lineman | 70 00 | ..... | ..... | " " |
| Terrace | ..... | H. B. Birch, operator | 75 00 | | | |
| Stewart Branch— | | | | | | |
| Rosswood | 35 | C. D. Garrity, operator | 75 00 | 1 50 & 10 | ..... | Provisions supplied. |
| | | G. W. Rogers, lineman | 70 00 | ..... | ..... | " " |
| Aivaush | 32 | A. L. Lanter, opr. and lineman. | 75 00 | 2 00 & 15 | ..... | $30 per month board allowance. |
| Alice Arm | 25 | P. Burrell, opr. & l'man. | 75 00 | " " | ..... | " " " |
| Amyox | 22 | R. H. Neilson, opr. and l'man | 75 00 | " " | ..... | " " " |
| Maple Bay | 15 | A. J. Martin, opr. | 110 00 | " " | ..... | |
| Stewart | 42 | W. C. Cameron, l'man. | 75 00 | ..... | | |
| Hazelton & P. R. Br.— | | | | | | |
| Graveyard Pt | 8 | G. T. Tynes, opr. and l'man | 75 00 | 1 50 & 10 | ..... | $25 per month board allowance. |
| Hole-in-Wall | 15 | C. W. Mitchell, opr. & l'man. | 75 00 | " " | ..... | " " " |
| McLeod's | 8 | Jas. Adams, launch serv | 75 00 | " " | ..... | " " " (closed Mar. 12, '12). |
| Telegraph Point | 9 | G. L. Daires, opr. and l'man. | 75 00 | " " | ..... | " " " |
| Port Essington | ..... | G. A. Taylor, agent | 10 00 | | | |
| Haysport | 16 | J. W. Ferguson " | 75 00 | " " | ..... | " " " |
| North Pacific* | 10 | Paul Wickes, operator | 80 00 | " " | ..... | Telephone rental, $2.50 per month. |
| Inverness* | 2½ | " | ..... | " " | ..... | " " " |
| Port Edward | ..... | Accommodation | | | | |
| Prince Rupert | 13½ | F. W. Dowling, dist. supt. | 175 00 | 1 00 & 7 | | |
| | | L. W. Waugh, mgr. | 150 00 | | | |
| | | E. L. Young, operator | 110 00 | | | |
| | | H. McMillen, clerk | 100 00 | | | |
| | | Carl Halverson, messenger | 40 00 | | | |
| Georgetown* | 20 | Commission office | 25 p.c. T.L. tolls | 1 50 & 10 | | |
| Port Simpson* | 10 | H. C. Flewin, agent | 30 00 | " " | ..... | 'Phone also installed at Port Simpson hospital; the residence of Dr. Kergin, Port Simpson, and office of Georgetown Sawmill Co.; rental, $2.50 per month. |

*Telephone Offices (on composite Telegraph and Telephone line)

| | | | | | | |
|---|---|---|---|---|---|---|
| Main Line— | | | | | | |
| Kispiox | 16 | Hugh Taylor, 25 p.c. commiss. | | " " | | $30 per month, board allowance. |
| 1st Cabin | | W. W. Perry, operator | 75 00 | | | |
| 2nd Cabin | 33 | L. D. Maxwell, operator | 75 00 | " " | | Provisions supplied. |
| | | E. W. Murray, lineman | 70 00 | | | " " |
| 3rd Cabin | 25 | Jno. Peers, operator | 75 00 | " " | | " " |
| | | W. A. Larimer, lineman | 70 00 | | | " " |
| 4th Cabin | 20 | L. T. Kenney, operator | 75 00 | 1 50 & 10 | | " " |
| | | Frank Dreifte, lineman | 70 00 | | | " " |
| 5th Cabin | 20 | J. J. Doré, operator | 100 00 | 1 50 & 10 | | " " |
| | | Allen Johnson, lineman | $3 per day | | | " " |
| 6th Cabin | 20 | Robert Todd, operator | 100 00 | 1 50 & 10 | | Provisions supplied, J. R. Baker on mil. leave. |
| | | J. Veale, lineman | $3 per day | | | " " |
| 7th Cabin | 19 | W. I. Weekes, operator | 100 00 | 1 50 & 10 | | " " |
| | | Carl Jepson, lineman | $3 per day | | | " " |
| 8th Cabin | 19 | Robert Todd, operator | 100 00 | 1 50 & 10 | | " " |
| | | Paul Pruckner, lineman | $3 per day | | | " " |
| 9th Cabin | 17 | J. Chilner, operator | 100 00 | 1 50 & 10 | | " " |
| | | L. Mason, lineman | $3 per day | | | " " |
| Echo Lake | 32 | G. T. Waring, jr., operator | 100 00 | 1 50 & 10 | | " " |
| | | J. Huston, lineman | $3 per day | | | " " |
| 25 Mile Cabin | 25 | J. W. Morin, operator | 100 00 | 1 75 & 10 | | " " |
| | | D. McDonald, lineman | $3 per day | | | " " |
| Iskoot | 16 | W. H. Blake, operator | 100 00 | 1 75 & 10 | | " " |
| | | A. L. Wilson, lineman | $3 per day | | | " " |
| Telegraph Creek | 61 | J. Wrathall, operator | 100 00 | 1 75 & 10 | | $1 per day, board allowance. |
| Shesley | 45 | F. N Jackson, opr. & lineman. | 82 50 | 1 75 & 10 | | Provisions supplied. |
| Nahlin | 61 | J. T. Pilling, operator | 82 50 | 2 00 & 15 | | " " |
| | | Andrew Johnson, lineman | 75 00 | | | " " |
| Nakina | 49 | Edward Barrett, opr. & lineman | 82 50 | 2 00 & 15 | | " " |
| Atlin | 63 | A. B. Taylor, local manager | 116 66 | 2 00 & 15 | | $60 per month, board allowance. |
| Tagish, Y. T. | 75 | J. D. Laurence, operator | 82 50 | 2 25 & 15 | | Provisions supplied. |
| | | A. Dickson, lineman | 75 00 | | | " " |
| Carcross, Y. T. | 18 | S. E. Chambers, operator | 82 50 | 2 25 & 15 | | $40 per month, board allowance. |
| White Horse, Y. T. | 65 | G. S. Fleming, act dist. supt. | 210 00 | 2 50 & 15 | | |
| | | J. B. Watson, operator | 155 00 | | | |
| | | Wm. Blackwell, messenger | 65 00 | | | |
| Lower Laberge | 59 | W. C Fraser, opr. & lineman. | 82 50 | 2 50 & 15 | | Provisions supplied. |
| Hootalinqua | 30 | Jno. Ward, opr. & l'man | 82 50 | 2 50 & 15 | | " " |
| Livingstone Creek Branch (Telephone Line only)— | | | | | | |
| Mason's Landing | 35 | Commission Office | 25 p.c. T.L. tolls | 2 50 & 15 | | |
| Livingstone Creek | 35 | " | " | 2 50 & 15 | | |
| Big Salmon | 34 | Jas. Withrow, operator | 82 50 | 2 50 & 15 | | Provisions supplied. |
| Yukon Crossing | 38 | R. Young, operator | 82 50 | 2 75 & 15 | | " " |
| | | H. O. Lakken, lineman | 75 00 | | | " " |
| Carmacks | 42 | H. McMillan, operator | 82 50 | 2 75 & 15 | | " " |
| Fort Selkirk | 8 | R. P. Hall, opr. and lineman | 82 50 | 2 75 & 15 | | " " |
| Coffee Creek | 30 | G. C. McDonald, operator | 82 50 | 2 75 & 15 | | " " |
| | | Angus Morrison, lineman | 75 00 | | | " " |

## GOVERNMENT TELEGRAPH SERVICE—*Continued.*

### YUKON LINE—*Continued.*

| Stations. | Intermediate Distance. | Position. | Salaries per Month. | Tariff from Ashcroft. | Night Rate. | Memo. |
|---|---|---|---|---|---|---|
| | | | $ cts. | | | |
| Main Line—*Con.* | | | | | | |
| Stewart River | 75 | B. DeWitt, opr. and lineman | 82 50 | 2 75 & 15 | | Provisions supplied. |
| Ogilvie | 23 | N. P. Hansen opr. and lineman. | 82 50 | 3 00 & 20 | | " " |
| Dawson | 48 | Wm. Brownlow, local manager. | 150 00 | 3 00 & 20 | | $100 per month, board allowance. |
| | | Geo. A. McLachlin, operator | 125 00 | | | " " |
| | | H. W. Butler, cashier | 125 00 | | | " " |
| | | C. A. Couture, line foreman | 125 00 | | | " " |
| | | J. H. Grant, messenger | $3 per day | | | |
| Forty Mile | 55 | W. Lafontaine, opr. and lineman | 82 50 | 3 25 & 20 | | Provisions supplied. |
| International Boundary | 40 | Connection made here with U. S. Govt. Alaskan Line | | | | |
| Queen Charlotte City | 0 | W. N. Giegerich, operator | 85 00 | | | |
| Dead Tree Point | 15 | J. B. Berry, operator | 10 00 | | | |
| Tl-ell | 17 | B. A. Burns, lineman | 75 00 | | | |
| Ports Clements | 20 | V. F. Dunn, operator | 75 00 | | | |
| Massett | 18 | L. A. Graef, operator | 75 00 | | | |
| | 70 | | | | | |
| Additional Construction | 53 | | | | | |

### ASHCROFT—WALHACHIN—SAVANOS

| | | | | | | |
|---|---|---|---|---|---|---|
| Cache Creek | 0 | | | | | |
| Semlin | 15 | | | | | |
| To loop | 12 | | | | | |
| Walhachim on loop | 3 | | | | | |
| Savanos | 10 | | | | | |
| | 40 | | | | | |

YUKON TARIFFS.

The rates given for points north of Quesnel are one-third less than those primarily adopted, which were calculated on the general basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, counting the distance from Ashcroft.

*Exceptional Rates.*—Hazelton to Ashcroft 1-00 and 7, June 1, 1910; Prince Rupert to Ashcroft, 1-00 and 7, November 1, 1909.

The local rates between offices north of Quesnel are calculated on the basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, and the local rates between offices north of Atlin are fixed at 50 cents for each 100 miles.

*Cable Messages.*—On transatlantic business, the word rate is twice as much as the additional word rate given in the list for all points north of Ashcroft-Barkerville, 3x2=6, Dawson 20x2=40c per word.

On transpacific business the word rate is the additional word rate plus 4c.: Barkerville, 3+4=7c.; Dawson, 20+4=24c. per word to or from Ashcroft.

*Press Despatches.*—For the Yukon line the rate is 1 cent per word, minimum charge $1; this applies to the whole line. Exception, Barkerville-Ashcroft section (local), minimum charge 50 cents.

| | | |
|---|---|---|
| Yukon system connects at boundary with U.S. Sig. Service Telegraph System. | | |
| " | " | Ashcroft with Canadian Pacific Railway Telegraph. |
| " | " | Blackwater with Fort George and Alberta Telephone Company. |
| " | " | Carcross with W.P. and Y. Ry. Telegraph. |
| " | " | Quesnel Forks with Quesnel Hydraulic Co.'s line to Hydraulic. |

## GOVERNMENT TELEGRAPH LINES: TARIFFS.

SPECIAL TARIFF.

*Cable Messages.*—Rates for cable messages passing over the Yukon line will be found in connection with the Yukon tariff on this page.

Elsewhere, the rate for transatlantic messages passing over the Government lines is the same as for ordinary through messages, excepting where the ordinary tariff is more than 25 cents; in such cases the Government line rate is 4 cents per word, with a minimum charge of 25 cents. For example:—

For a message of six words or less, the charge is 25 cents for Government lines.

For a message of seven words the charge is (7x4) 28 cents for Government lines.

For a message of twelve words the charge is (12x4) 48 cents for Government lines.

In every case the counting of words includes the address and signature in the same way as for transatlantic cable tolls.

*Press Despatches.*—The rate for press despatches on the Government lines (excepting the Yukon line), is 20 cents per 100 words: no single message less than 20 cents.

## REGULAR TARIFF.

### NOVA SCOTIA.

*Lines in Cape Breton.*

*Local rate* between offices ..... 25-1*
*Through rate,* on business exchanged with the G.N.W. Tel. Co. to and from North Sydney transfer office ..... 15-1

*Night messages* are exchanged with the Western Union Telegraph Company for offices on these lines. Rate, 1 cent per word with minimum of 15 cents. The local night rate is 1 cent per word with minimum of 25 cents.

*Line from Barrington to Cape Sable—Local rate, 12-1.*

Cape Sable Lighthouse ..... Through rate 12-2 from Barrington. W.U. office.
Newellton ..... " " "
This line is now operated by the local telephone company. Terms of lease provide for former telegraph rate as above not being exceeded.

### NEW BRUNSWICK.

*Line from Chatham to Point Escuminac.*

*Local rate* between offices ..... 25-1
*Through rate,* on business exchanged with the G.N.W. Tel. Co., to and from Chatham transfer office ..... 15-1

*Bay of Fundy.*

*Line from Eastport, Me., to Campobello, Grand Manan, and Whitehead Islands:—*
*Local rates* between offices on Grand Manan and Whitehead island, 15-1; Grand Manan and Campobello island, 25-2; The Island and Eastport, Me., 25-2, W.U.O.
*Through rate* same as local rate on business exchanged with W. U. Tel. at Eastport ..... 25-2

### QUEBEC.

*Anticosti Island.*

*Local rate* between offices ..... 25-1
Between offices on Anticosti island and Gaspé ..... 50-2
Between offices on Anticosti island and Gaspé on the North Shore St. Lawrence and Chicontimi lines ..... 50-2
*Through rate,* same as local rate on business exchanged with G.N.W. Tel. at Gaspé ..... 50-2

*Magdalen Islands.*

*Local rate* between offices ..... 25-1
Between offices on Magdalen islands and offices on Government lines on Cape Breton ..... 50-2

* Where the tariff rate is entered as 25·1 or 25·2, etc., the meaning is that the rate is 25 cents for ten words and 1 cent or 2 cents for each additional word.

*Through rate,* on business exchanged with Western Union Tel. at North Sydney same as local rate . . . . . 50-2

Special winter rate for letters exchanged with mail at Bay St. Lawrence, ½ cent per word. (See note in report 1906-7, p. 8.)

*St. Pauls Island.*

Between St. Pauls Island and offices on Government lines in Cape Breton . . 50-2

*Through rate* to and from North Sydney on business exchanged with the W.U. Tel., same as local rate . . . . . 50-2

*North Shore St. Lawrence and Chicoutimi.*

*Local rate* between offices less than 100 miles apart . . . . . 15-1

Between offices more than 100 miles apart . . . . . 25-1

Between offices on these lines and Anticosti *via* Long Point . . . . . 50-2

*Conjoint rate* between offices on Government lines west of Bersimis and offices on the G.N.W. line as far as and including Quebec.

Equally divided between Company and Government lines . . . . . 25-2

*Conjoint rate* between offices on Government line east of and including Bersimis and G.N.W. to Quebec (Government line, 25-1; Company's line 15) . . . . . 40-2

*Through rate* for Government line offices west of Bersimis, to be added to G.N.W. tolls from Quebec . . . . . 15-1

*Through rate* for Government line offices east of and including Bersimis, to be added to G.N.W. tolls from Quebec . . . . . 25-1

NOTE.—The above lines connect with the G.N.W. Telegraph system at Chicoutimi and at Bay St. Paul and Murray Bay, but the checking of all through business exchanged with the company is done at Quebec.

*Quarantine System.*

*Line from Quebec via Orleans Island and Isle aux Reaux.*

*Local rates* between offices:—

Quebec and Grosse Isle . . . . . 25-1

Quebec and Orleans Island and Isle Reaux . . . . . 15-1

Orleans Island and Grosse Isle . . . . . 25-1

Isle Reaux and Grosse Isle . . . . . 15-1

On Orleans Island . . . . . 15-1

*Through rate* same as local business exchanged with G.N.W. Tel. at Quebec.

*Orleans Island Telephone System.*

*Local rates* between offices:—

| | Conversations, 3 minutes. | Messages, 20 words and 5 words. |
|---|---|---|
| St. Petronille and St. François and intermediate . . . . . | 5c. | 5-2 |
| Quebec exchange, St. François and intermediate . . . . . | 15c. | 15-5 |

*Through rate* 5c. for Government line plus regular tolls of the Bell Telephone Co. for points beyond Quebec.

*Beauport-Laval Line (Telephone).*

*Local rate* between offices:—

| | Conversations, 3 minutes. | Messages, 20 words and 5 words. |
|---|---|---|
| Beauport and Laval and intermediate | 10c. | 10-3 |
| Quebec exchange and Laval and intermediate | 15c. | 15-5 |
| *Through rate* to be added to the Bell Telephone Company's rate beyond Quebec | 10c. | 10-5 |

NOTE.—Of these, exchange and through rates, $\frac{3}{5}$ goes to the company in each instance.

The rate of charge for telephones, aside from the commission offices, has been fixed as hereunder.

For connection within $\frac{1}{2}$ mile of regular station, $9 per annum.

For each additional $\frac{1}{2}$ mile of line, $4 per annum. The regular tolls being charged in addition on all main line connections.

*Charlesbourg and Martineau Mills.*

*Line connects with Bell Telephone System at Charlesbourg.*

| | Conversations, 3 minutes. | Messages, 20 words and 5 words. |
|---|---|---|
| *Local* between points on the Government line | 10c | 10-3 |
| *Local* between points on the Government line and the Quebec Exchange | 20c. | 20-5 |
| (Of this 50 per cent belongs to the company.) | | |
| *Through* between points on the Government line and points on the system of the Bell Telephone Company, to which the Company's established rates from Quebec are to be added | 10c | 10-3 |

*Timiskaming District (Telephone Line.)*

| | Conversations, 3 minutes. | Messages, 20 words and 5 words. |
|---|---|---|
| Kippewa Dam—North Timiskaming and intermediate | 25-5 | 25-5 |

Same rate for both local and through business, that is business exchanged with the connecting line at North Timiskaming.

ONTARIO.

*Pelee Island Line (Telephone).*

*Local rate* between offices:—

| | |
|---|---|
| On the mainland Leamington-Point Pelee | 15-1 |
| On the island | 15-1 |
| On the island and Leamington | 25-1 |
| *Through rate* on business exchanged with the G.N.W. Tel. at Leamington | 15-1 |

This line is operated by telephone in conjunction with the Bell Telephone Co. Charges for conversations being based on local tolls plus the regular tolls of the company beyond Leamington. (Local rates, 15c. or 25c. for three minutes conversation and proportionate charge for any period in excess of three minutes.)

NORTHWEST TERRITORIES—SASKATCHEWAN AND ALBERTA.

*Qu'Appelle—Edmonton Line.*

*Local rates* between offices less than 12 miles apart . . . . . 15-1
Between offices already reached by company's lines, excepting when the company's rate is higher . . . . . 25-2
Between offices solely on Government line . . . . . 35-2
*Through rates,* for business exchanged with the connecting companies, same as the above local rates.

*Edmonton-Athabaska-Landing and Peace River Line.*

*Local rates* between offices . . . . . 15-1 to 100-7
Maximum charge between offices in the two divisions above and below Edmonton . . . . . 100-7
A tariff sheet was issued 1st February, 1913.

*Moosejaw—Wood Mountain Line.*

*Local rate* between offices . . . . . 25-2
*Through rate* the same.

BRITISH COLUMBIA.

*Vancouver Island Lines.*

*Local rates* between offices . . . . . 25-2
*Conjoint rate* between offices on Government lines and C. P. Tel. line on Vancouver Island . . . . . 25-2
*Through rate,* business exchanged with Can. Pac. Tel. at Nanaimo and Victoria, same as local rate . . . . . 25-2

*Golden-Windermere Line (Telephone).*

Messages.
*Local* and *through* rate . . . . . 25-2
Subscribers for telephones at $36 per year are exempt from above tolls for messages.

*Salt Spring Island, Pender Island, etc. (Telephone).*

*Local rate*—Conversations, two minutes . . . . . 25c.
Each additional minute . . . . . 15c.
*Through rate*—The above line connects with the B. C. Telephone Co. at Duncan Station. The company's tolls are added to the above rates on through business.
*Conjoint rate*—Between offices on the above islands and offices on the C. P. line, on Government line reached by the C. P. Tel. on Vancouver Island . . . . 25-2

*Kamloops-Okanagan Valley System (Telephone).*

*Local and through rates,* 25c. to 60c., according to distance between offices 100 miles apart and over, in stretches of 50 miles:—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Where message rate is | 25c. | for 10 words, | 2c. | for extra words; | convers'n | 10c. | p. min. |
| " | 35c. | " | 3c. | " | " | 15c. | " |
| " | 40c. | " | 3c. | " | " | 20c. | " |
| " | 50c. | " | 4c. | " | " | 25c. | " |
| " | 60c. | " | 4c. | " | " | 30c. | " |

Minimum charge for messages, 25c; for conversation, 15c.
(A tariff sheet was issued for circulation 1st January, 1912.)

# APPENDICES

## GOVERNMENT TELEGRAPH SERVICES

### ANNUAL REPORT FOR 1914-15.

Sectional reference (1) Cape Breton lines.

(2) Bay of Fundy lines.

(3) Magdalen Islands.

(4) Anticosti Island lines.

(5) North Shore, St. Lawrence and Chicoutimi.

(6) Quarantine Telegraph system.

(7) Pelee Island system.

(8) Northwest lines.

(9) " (Inspector).

(10) British Columbia lines.

(11) Kamloops-Penticton lines.

(12) Yukon Telegraphs.

(13) Cable ship *Tyrian*.

## REPORT No. 1.—CAPE BRETON.

St. John, N.B., June 25, 1915.

D. H. Keeley, Esq.,
General Superintendent,
Government Telegraph Service,
Ottawa, Ont.

Dear Sir,—I beg to submit annual report for the fiscal year ended March 31, 1915, covering the Government lines in Cape Breton.

### CONDITIONS GENERALLY.

Notwithstanding unsettled conditions, brought about by the war, business on the whole has been exceedingly well maintained, the volume being slightly in excess of that obtained during the previous year.

A most favourable winter, coupled with the fact that all sections were carefully gone over during the summer by the general repairers, accounted for practically uninterrupted communication, no prostrations of lines having occurred, nor, on the other hand any material damage from sleet or high winds.

Pursuant to authorization having been given in September, 1912, the cable station and manager's dwelling at Bay St. Lawrence were given two coats of paint which, with some minor outside repairs put the property in first-class condition. This is the first expense in this respect since the new station was built by the Department nine years ago. The heating apparatus, which was not giving satisfaction, was also repaired and an additional radiator installed.

On October 25th, James G. Dunlop, general repairer at Baddeck, died after an illness of but a few hours.

On account of the erection of a new cable station at North Sydney, by the Western Union Telegraph Company, it became necessary to extend the four Government lines from the old to the new station. This work was done under immediate supervision of Plant Superintendent Wetmore, of the Western Union, and General Repairer Joseph Logue; the new extension being made with copper wire.

On January 28th, fire destroyed the residence of Mrs. J. D. Morrison, agent and operator at St. Esprit, all equipment being lost. Temporary quarters were procured, and the office opened on February 28th.

During the year, permission was granted the Alder Point Mutual Telephone Company to utilize fifty-five Government line poles between Little Bras d'Or and Florence.

### CONSTRUCTION.

In March, an extension of the telephone line from Loch Ban to Inverness was authorized and work taken in hand by General Repairer P. A. Doyle, the poles being already erected it was only necessary to string four miles of wire. This extension provides a through connection from Inverness to all Government telephone stations in the counties of Inverness and Victoria.

In December, the construction of a new line was started, running from Brooks Village to Glendale, thirty-two miles, the route being through Mull River, Glencoe Mills, Upper Glencoe, and River Denys. This work was done under supervision of General Repairer J. F. McMillan, of Port Hastings, and was completed early in February. It is the intention to operate this line by telephone.

NEW TELEGRAPH OFFICES.

*Framboise, N.S.,* on the Hawkesbury-St. Peters section, opened December 1st, Kenneth J. Strachan, agent and operator; remuneration, 25 per cent of Government line tolls, guaranteed $50 per annum.

*McAdams Lake, N.S.,* on North Sydney section, opened August 17th, Angus McInnis, agent and operator; remuneration, 25 per cent of Government line tolls, guaranteed $50 per annum.

*Salmon River, N.S.,* on Louisburg section, opened September 10th, Colin McDonald, agent and operator; remuneration, 25 per cent of Government line tolls, guaranteed $50 per annum.

*Skye Glen, N.S.,* on Port Hastings section, opened September 16th, Mrs. James H. Austin, agent and operator; remuneration, 25 per cent of Government line tolls, without guarantee.

*West Ingonish, N.S.,* on Baddeck section, opened September 18th, J. P. Nunn, agent and operator; remuneration, 25 per cent of Government line tolls, without guarantee.

NEW TELEPHONE STATIONS.

In August and September, under supervision of General Repairer Logue, of North Sydney, and Dunlop, of Baddeck, offices were opened as under:—

Nyanza.
West side of Middle River.
Upper Middle River.
North Side Little Narrows.
South Side Little Narrows.
Washabuck Bridge.
Washabuck Centre.
Christmas Island.
Beaver Cove.
Shenacadie.

BRANCH TELEPHONE STATIONS.

In September, a branch telephone connection was opened in the residence of R. G. Gunn, M.D., of Kenloch; regular business to be accounted for through the Kenloch office, together with an annual charge of $9 per annum for the connection.

A branch connection similar to the above was opened in the Barytis Company's premises (near Scottsville) with an annual charge of $11.

TELEGRAPH OFFICES RE-OPENED.

*Capsticks, N.S.,* which was closed on October 25, 1913, was re-opened on November 5, 1914, J. W. Capsticks, former agent, in charge. This agent was, however, succeeded on February 23 by William Capsticks.

TELEGRAPH OFFICES CLOSED.

*Grand Narrows N.S.,* former agent and operator, John C. McNeil, discontinued on January 31. Office closed at end of fiscal year, new agent not having qualified as an operator.

CHANGES OF AGENTS.

*Bay St. Lawrence, N.S.*, Joseph R. McNeil, manager, and Norman McDonald, assistant; vice Vilbon Theriault and Mrs. V. Theriault.

*Fourchie, N.S.*—Miss Lena McDonald, who was in charge of this office temporarily, was drowned on December 18, Margaret C. McLean, former agent, filling in until end of February, awaiting advice of new appointment.

*Eskasoni, N.S.*—Miss Sadie McMillan, agent and operator, resigned February 28. No appointment made up to close of year.

*Brooks Village, N.S.*—Miss Estelle Jamieson, agent and operator, resigned November 30; Leo Jamieson appointed.

*North River Bridge, N.S.*—N. J. Morrison, agent and operator deceased on May 8; D. J. Morrison appointed.

SALARY INCREASES.

*Baddeck.*—J. G. Dunlop, general repairer, from $45 to $60 per month, from July 20; the additional salary covering the care and maintenanee of 'phone circuits.

*L'Ardoise, N.S.*—Miss M. E. Sampson, agent and operator, from $50 to $100 per annum, from July 1, on account of general increase in business.

REPAIRERS.

John McLeod, of Leitches Creek, appointed repairer covering section between Leitches Creek and Steel's Crossing, from January 15, at salary of $50 per annum.

John T. Tobin, repairer, Little Bras d'Or bridge, covering section between Alder point and Little Bras d'Or, salary $50, resigned June 1, but up to close of fiscal year no new appointment had been made; the late repairer undertaking to do the necessary work pending new appointment.

Norman Ritchie, Englishtown section—Englishtown to Big Bras d'Or, salary $60, appointed June 1, vice Malcolm Campbell, resigned April 1.

Wm. McLean, Boulardarie Centre, appointed covering seetion Big Bras d'Or and Upper Kempt Head, from May 1, salary $50 per annum.

Graham Dunlop, of Baddeek, appointed general repairer of Englishtown loop and seetion between Big Bras d'Or and Meat Cove, from October 28, salary $60 per month.

GENERAL REPAIRS.

*St. Peter's Section.*—Under instructions, General Repairer Murdoch.McRae set 1,894 new poles between Gabarus lake and Kempt road, the old poles being unsafe and worn out. This work together with the neeessary bushing, pulling in slack wire, etc., was done during the months of August, September and Oetober. The balanee of the section was carefully gone over, poles reset where neeessary, and line put in good shape for the winter.

*Louisburg Section.*—In addition to regular work, 271 new poles were found necessary to replaee those found defective, 338 poles were reset, lines bushed out and made safe.

*Louisburg Section.*—A loop line of half mile was constructed into Salmon river, to admit of new office being opened.

*Port Hastings Section.*—General repair work was started early in August, taking in the line running to Inverness ineluding the section running to Outer Island, all poles that were considered unsafe were reset, tamping and banking done where neeessary, loose connections cut out and line thoroughly bushed out. The seetion between Strathlorne and Whyeocomagh also received similar attention.

*Baddeck Section.*—On account of the sudden demise of General Repairer James G. Dunlop, the section between Big Bras d'Or and Meat Cove was partially covered by J. D. McAulay, repairer, of Englishtown; the southern end between Englishtown and the north shore receiving the most attention in view of the fact that it is proposed to repole the section between the north shore and Meat Cove during the coming season. On appointment of Mr. Graham Dunlop to the position of general repairer, an inspection trip was made and the line put in good condition.

*Inverness Section.*—Outside of covering the section between Inverness and Meat Cove, doing such work as resetting and straightening poles, there was no special heavy work done.

*Inverness Section.*—The telephone lines were bushed out and necessary work done to put them in first-class condition.

*Inverness Section.*—It is proposed during the coming season to repole the section between Cape Rouge and Eastern harbour, also beween Margaree Forks and South West Margaree; these lines being in bad shape.

*North Sydney Section.*—General Repairer Logue, in addition to considerable work in the vicinity of North Sydney, covered the Boulardarie line and the main line running to Big Bras d'Or, making the usual resets, cutting bushes and trimming lines. As the Boulardarie line is getting old, it was necessary to restore practically 800 poles, in order to put it in any kind of shape to withstand the severe winter weather.

I have the honour to be, sir,

Your obedient servant,

D. C. DAWSON,

*Superintendent.*

## REPORT No. 2.—BAY OF FUNDY.

FLAGG'S COVE, GRAND MANAN, N.B., May 29, 1915.

D. H. KEELEY, Esq.,
General Superintendent, Government Telegraphs,
Ottawa.

DEAR SIR,—I beg to submit my annual report on the Government Telephone and Telegraph lines of the Bay of Fundy system for the year ending March 31, 1915.

There have been very few interruptions during the year. The telegraph line from Flagg's Cove to Seal Cove is in good working order, one or two crosses in heavy gales being the extent of the trouble for the year; the offices and equipment are in good condition.

The Grand Harbour-White Head telephone cable broke on the shore at White Head during a heavy gale in February, 1915, but with the help of two men we repaired the break, and this line is working well at the present time. In June, 1914, Lineman Gilmore completed the branch line at Woodwards Cove, which connects the Duck Island and Nantucket offices with the White Head line; the wire for this line was forwarded to me from the Department, and the poles were left here by Mr. MacDonald of the *Tyrian* on their last visit a year ago. We have 75 poles on hand for renewals when needed.

The Southwest Head-Seal Cove line and its cabled branch to Gannet Rock has given satisfaction throughout the year; a brush fire in April, 1915, destroyed three or four poles at Southern Head, but I had them replaced, and communication was not interrupted. The line is in good working order at the present time.

With regard to the Flagg's Cove-Eastport cable line, am pleased to say that the main cable has withstood the winter's storms and, with the exception of a break in the land line on Campobello Island caused by falling trees, there has been no interruption during the year. In the month of October, I went to Eastport to repair a broken telephone in the Western Union office, and help Lineman Parker extend the cable at Dunn's Beach by splicing on an extra piece left by Mr. MacDonald so that we could make connection with the new cable hut which Mr. Parker had completed at that time. Everything on this line is in good shape with exception of a very poor telephone at the Western Union; it has fallen on the floor a number of times, and is in very bad shape; will replace with a new one which I have ordered lately.

Appended is the tabulated statement of offices, etc.,

I remain, sir, yours faithfully,

J. R. PARKER,

*District Superintendent.*

## REPORT No. 3.—MAGDALEN ISLANDS.

GRINDSTONE, Magdalen Islands, Que., May 25, 1915.

*Annual Report ending March 31, 1915.*

D. H. KEELEY, Esq.,
Gen. Supt., Govt. Tel. Ser.,
Ottawa, Ont.

DEAR SIR,—I beg to submit my annual report from April 1, 1914, to March 31, 1915, in accordance with message via wireless station received some time ago.

From April 4, 1914, to July 24 the Byron island cable was interrupted. The damage is likely to have arisen from the shore ice, which was very heavy last season, stranding the cable as that ice broke away from the shore. The repairing which was done by Mr. A. B. McDonald, on July 24, proved very satisfactory, as this cable has been working splendidly since that date.

From April 25 to May 5, the Entry island cable was interrupted, connections having been restored by the lineman, Wm. Renaud, the trouble was found at Amherst harbour cable hut, where the connections were loose and also general disorder in that locality on account of high spring tide moving the cable, besides the high winds, sleet, etc., which the line had encountered during the winter. I am glad, however, this cable has given great satisfaction ever since being repaired.

On May 24, the Meat Cove cable was interrupted, and was repaired July 16. Again December 24 the cable was interrupted, and nothing has been received from Meat Cove, that is to say from the mainland, except by wireless. As can be noticed, the Meat Cove cable was interrupted most part of the time this last year, in fact this cable is giving away often during late years, breaking even several times during this year, and although the Meat Cove cable has rendered valuable services in the past, it is becoming of less importance.

The Marconi Company stationed here in Grindstone has handled our commercial traffic since December 28; most of the traffic is handled by them at all times. Parties will take the trouble of going to the Marconi station, others who cannot go, mail their messages to the wireless operator and order him to mail the answer back to them. Why is this done? It is easily understood, when considering the present telephone system which is not secret for the business men.

The cable to Meat Cove even when operated is not very busy, as I have said, on account of the preference given to the Marconi Company. I understand here also that the company's great attention, the reliability of always having a connection almost permanently on service and the fact that night lettergrams can be mailed in Pictou, a business centre, at a cheap rate, while messages via Meat Cove afford no quick mail service compared to it, giving the Marconi Company the opportunity to get the island's traffic.

A cable laid to Souris, P.E.I., a distance shorter than to Meat Cove, would really be a boon for the Magdalen islands. Our mail boat stops with freight and passengers at Souris, vessels freighting also to and fro, in fact most of the islands' trade is carried on in that direction, hence the great inconvenience of being deprived of a direct connection with P.E.I. with which we are so continually in touch. It would also mean great advantage for the Souris people doing considerable freighting with our mail boat, etc., benefiting their own trade as well. This of course would incur no expense if the cable was transferred from Meat Cove to this side.

Our land wires cover about 83 miles, running practically into the principal places of the islands; this line has been in good order this last season, although Mr. Binet could not give all the attention he himself desired on account of his ill health, and I am sorry to say he is now confined to bed. The linemen have been particularly attentive, and there have been very few interruptions, none I must say worth mentioning.

On September 2, the Cape Verde operator, Mrs. A. Poirier, one of our faithful operators, died suddenly. The office was removed on October 5 to Julien Richard, the succeeding operator, about some hundred yards from the late Mrs. Poirier.

On September 11, a line was strung upon our poles from Mr. J. Ballantyne, distance of about ¾ mile to my office, and this branch is operated by a switch. There are at present several applications for telephone boxes which might be dealt with similarly. No new office has been opened besides this one above mentioned.

I have the honour to be,

Yours faithfully,

A. LEBOURDAIS.

## REPORT No. 4, ANTICOSTI ISLAND.

WEST POINT, Anticosti, April 1, 1915.

D. H. KEELEY, Esq.,
Gen. Supt., Govt. Tel. Service,
Ottawa.

DEAR SIR,—I beg leave to submit my annual report on Government telegraph line under my charge for the year ending March 31, 1915.

The mileage is the same as last year and the repairers duties remain numerous and hazardous.

On November 17, the north shore cable became interrupted and after sending repairer with local man to inspect land line and shore end of cable and no trouble being found, I at once notified your department of the interruption, November 19.

Although we had many interruptions on our land line owing to extraordinary rough weather, especially from South West point to Heath point, I am pleased to say that the line has been in good working order, the whole year round. The interruptions were of short duration, except on one occasion, when it lasted twelve days, owing to repairers being unable to cross rivers which were covered with thin ice and sea too rough outside.

Fox Bay station is still connected by phone with Heath point.

Our telegraph stations are the same as last year, that is eight in number.

Our agent at Ellis Bay, Mr. Jos. Duguay, who was on commisssion of 25 per cent has been allowed, at his request, a fixed salary of $50 per month, dating August 1, 1914.

The revenue of the line, inclusive of month of March amounts to $2,317.73. Ellis Bay office accounts for $207.84 of this amount.

Business on the line has been small since last December, owing to so little work being done. War crippled us even here. I anticipate much better business with opening of navigation.

I have the honour to be, sir,

Your obedient servant,

ALF. MALOUIN.

## REPORT No. 5, NORTH SHORE ST. LAWRENCE, CHICOUTIMI AND QUEBEC COUNTY TELEPHONE LINES.

### NORTH SHORE ST. LAWRENCE GENERALLY.

The business of the year on the whole North Shore system shows a very satisfactory increase over the previous year, especially during the summer months, when the main line was at times crowded to its full capacity.

The lines were maintained in good working condition by the repairing staff, the interruptions being few in number and of short duration.

### NORTH SHORE WEST AND CHICOUTIMI.

The usual repair and maintenance work was done by the linemen on their respective sections, and the wires generally have been kept in good operating condition.

The work of re-poling on the Chicoutimi-Peribonka line was continued, 379 new cedar poles being put in. Similar work was done on the section west of Bersimis, and some extra work on the St. Catherines Bay section.

### CHANGES.

April.—F. L. Bouchard appointed agent at Petite Rivière François in place of A. Tremblay, resigned.

May.—A. Lapointe appointed agent at Cap à l'Aigle in place of Miss Bergeron, deceased.

August.—Phydime Lavoie, agent, in place of A. E. Gagnon, resigned.

Oct.—Cap à l'Aigle agent resigned.

November.—S. Lavoie replaced operator Dubé at Chicoutimi on the enlistment of the latter for over-sea military service.

QUEBEC COUNTY TELEPHONE LINES.

The Laval telephone line and the Charlesbourg and Martineau Mills lines have been placed together under the above heading, and several extensions have been made with new installations of instruments.

Owing to the increased number of instruments in circuit it was found necessary to divide the line into several circuits with a central station at Rivière Jaune in charge of Madame A. Michaud.

## REPORT No. 6.—QUARANTINE LINES.

St. Jean, I.O., April 1, 1915.

D. H. Keeley, Esq.,
General Superintendent,
Ottawa.

Dear Sir,—I have the honour to submit my annual report for the year ending March 31, 1915.

The two cables between St. François and Isle aux Reaux which were broken by the ice on December 13, 1913, were repaired during the month of May, 1914, these cables were badly damaged, being cut in four places.

The Grosse Isle-Crane Island cable, which was broken by the ice on January 14, 1914, was repaired in May, 1914. It was broken in four places and a length of one knot carried away.

The Crane Island-Montmagny cable, which was raised in November, 1913, was relaid on May 12, 1914. This cable was broken by an unknown vessel near the Montmagny shore on October 10, 1914, and repaired on October 15.

On November 20, 1914, we prepared a tug and bateaux to lift the Crane Island-Montmagny cable, but were unable to do so owing to the severe weather and rapid formation of ice. This cable was broken by ice on November 22.

The telephone and telegraph lines on Orleans Island, Isle aux Reaux, and Grosse Isle were badly damaged by a sleet storm on February 24 and 25. One hundred and seventy-five poles were broken on Orleans Island, the copper wires being buried in snow and ice.

The St. Famille telephone circuit was temporarily restored on March 8, and all repairs completed on March 31.

An 18-foot boat, built by Mr. Filion at St. Laurent, was placed at my disposal for cable work, and gave satisfaction.

No changes have been made in the staff or equipment since my last report.

I remain,

Your obedient servant,

J. P. POULIOT,
*District Superintendent*

## REPORT No. 7.—ONTARIO LINES.

LEAMINGTON, Ont., April 5, 1915.

D. H. KEELY, Esq.,
Gen Supt., Gov't. Tel. Service,
Ottawa, Ont.

DEAR SIR,—In the matter of the Pelee Island telephone system from April 1, 1914, to March 31, 1915, I beg to report as follows:—

1. *Re* Cable.—Last May we thoroughly repaired the cable which, as reported previously, was badly broken in the storm of November 9, 1913, and which we were unable to repair that season owing to rough weather and lack of good material; but having received from the Department one knot of new cable, we lifted about six miles so as to make sure of getting all damaged or poor cable thoroughly examined, and cutting out the worst strained and a number of short or damaged sections, and laid the knot of new cable we had received at the point furthest south from the mainland immediately north of the ship channel. After being repaired, the cable gave good satisfaction until some time in the first week of December, when it went out of commission; but the Bell Telephone Company, which controls the cable connection on the mainland shore, did not inform me that communication had ceased. The first intimation I had was a note on December 7 from Mr. James E. Quick, repairer on Pelee Island, stating that communication was interrupted, and I at once took an instrument and went to the cable landing on the mainland and found the cable was broken or badly damaged. On December 8 I telegraphed the department, and also telephoned Dr. Park as to the situation. After receiving instructions by wire from the department, on December 9, to repair if possible, I telephoned Dr. Park, who sent Captain McQueen with his tug, and on the afternoon of the 11th, although the weather was unsettled and cold, we picked up the cable about two miles south of the mainland shore and placed a buoy; but from then until December 17, the lake was almost covered with ice and the weather having been continuously rough, we were unable to do any further examination or repair, and abandoned the work for the winter.

2. The line to Point Pelee is in good order with the exception of a few old poles which will require to be replaced this season by new ones, and will also require some new side blocks and insulators, of which I have a sufficient supply on hand, including poles.

We will require to change our wires at the electric railway crossing south of the Leamington office, where they cross above the electric line, and pass them in a tube or iron pipe under the railway line so as to avoid accidents. During a heavy sleet storm, about the last of January, one of our wires broke and came down on the trolley wire, grounding the east end of their system for a short time during the night until they pulled the wire off their line.

I herewith submit a list of offices and operators or agents, with summary of messages from April 1, 1914, to March 31, 1915.

Yours most respectfully,

JOHN McR. SELKIRK.

*Dist. Supt.*

## REPORT No. 8.—NORTHWEST LINES.

EDMONTON, ALBERTA, April 14, 1915.

D. H. KEELEY, Esq.,
General Superintendent,
Ottawa.

DEAR SIR,—I beg to submit herewith my annual report on the northwest lines covering conditions, repairs, construction and changes in staff up to March 31, 1915.

### CONDITIONS GENERALLY.

The lines were kept in good working order throughout the past year, except in one instance early in July where the line beween Sawridge and Grouard was open for about ten days. This was caused by heavy and continuous rains in the northern district during the spring and early summer. Lesser Slave lake overflowed its banks and washed out a portion of our line. The linemen were promptly on the ground and restored communication as quickly as possible. During the time the line was down messages were transferred by boat between Sawridge and Grouard, minimizing the delay. A few miles of the line in the more troublesome part was moved to higher ground, obviating a recurrence of this trouble. Owing to the watchful care of the employees, trouble from prairie and bush fires was practically nil. During the year, construction was continued on the Athabaska-Fort McMurray, Athabaska-Lac La Biche, Lake Saskatoon-Hudson Hope, and Battleford-Isle la Crosse lines. Between Qu'Appelle and Edmonton some miles of line were shifted from the fields to the roadway. An office dwelling was erected at Mirror Landing. A new storehouse was erected and fence built at Battleford. Details of these different works follow. Appropriations were made for office dwellings at Dunvegan, Grand Prairie city and Lake Saskatoon, but as sites were not secured it was found advisable to postpone the work of building for another year. The revenue for the year 1913-14 showed an increase over the preceding year of about 40 per cent. The revenue for 1914-15 has fallen off to the extent of $1,499.27 and the decrease in the number of messages was 19,099. During the month of March, business has increased and we look for a steady gain from this time forward.

### CONSTRUCTION.

*Athabaska-Fort McMurray line,*—Last year's report showed this line to be erected to Duncan creek, a point 57 miles from Athabaska. An appropriation of $45,000 was made available and construction carried on under Foreman E. D. Currier until the latter end of September, when Foreman A. Parry was placed in charge. An office was opened at Calling river, 39 miles from Athabaska on August 20, 1914. Office opened at Pelican on October 1, 1914, a distance of 61 miles from Calling river. Office opened at House river on December 1, a distance of 45 miles from Pelican, and the line was completed to Fort McMurray, 90 miles from House river and an office installed there on March 25, 1915, the total mileage for the year being 188 The total expenditure for the year was $31,359.83. That portion of the line between House river and Fort McMurray is built largely through a muskeg country, and being built in the winter it may be found necessary to add considerably to the bracing of poles, for which a revote of $800 has been requested from the unexpended part of the appropriation.

*Battleford-Isle la Crosse line.*—This line was built to Green lake during the year of 1913-14. Construction was carried on under Foreman McCartney for a further distance of 40 miles during the year. Work had to be closed as the contractors had not supplied sufficient poles to continue it. From this point to Isle la Crosse is approximately 70 miles. Poles and material are now on the ground and construction will be proceeded with when money is available. The total expenditure for the year was $5,731.95.

*Athabaska-La Biche Line.*—An appropriation of $11,200 was made available for this line. Construction began in August under Mr. A. Parry and later carried on under Foreman A. Cass. The line was completed to Plamondonville, a distance of 58 miles from Athabaska, and an office opened there on November 16. Poles were purchased and delivered, also material for a further distance of 12 miles to reach the Roman Catholic Mission, and the work will be continued when money is available. The total expenditure for the year was $10,141.13. The approximate amount required to complete the line is $1,000.

*Lake Saskatoon-Hudson Hope Line.*—An appropriation of $41,000 was available for the extension of our line from Lake Saskatoon to Hudson Hope. Construction was continued under Foreman G. Wilder. An office was established at Pouce Coupe on February 11, 1915, a distance of 75 miles. The line reached Fort St. John, a distance from Pouce Coupe of 70 miles on March 5, and an office installed at that point. The total expenditure for the year was $33,309.51. A further appropriation of $12,000 has been asked, which is expected to complete the line to Hudson Hope.

*Shifting lines generally.*—An appropriation of $5,000 was voted for the changing of the line from the fields to the highway between Qu'Appelle and Edmonton. Seventy-two miles were changed in the more settled districts during the year. There is still a large amount of this work to be done, which will be continued when money is available. The expenditure for the year was $4,980.40.

*Buildings.*—A new office-dwelling was erected at Mirror Landing at an expenditure of $2,000.

A storehouse was erected and fence built at Battleford, at a cost of $747.

CHANGES AND ADDITIONS IN STAFF.

| | |
|---|---|
| Battleford | E. Taylor, messenger, replacing E. Bidart, resigned. |
| Lloydminster | H. A. Elliott, agent, replacing G. Crisfield, resigned. |
| Andrew | W. J. Lee, lineman, replacing C. Norn, resigned. |
| Lamont | W. Valliant, agent, replacing H. A. Elliott, transferred to Lloydminster. |
| Edmonton | P. R. Campbell, agent, replacing G. Wilder while on construction. |
| | R. S. Shields, assistant, replacing E. J. Kane, transferred to superintendent office. |
| | E. J. Kane, clerk, superintendent office. New appointment. |
| | R. Berry, messenger replacing A. McGuire, and M. Ettling, resigned. |
| | J. McLean, lineman, replacing J. D. McIntyre, resigned. |
| Athabasca | F. Pettiford, lineman. New appointment. |
| Mirror Landing | P. F. Hoyte, agent, replacing A. E. Holmes, resigned. |
| | S. Green, lineman, replacing A. Parry, while on construction. |
| Sawridge | R. H. Simpson, agent, replacing J. M. Royer, resigned. |
| Grouard | C. A. Burpee, assistant, replacing R. Harper, resigned. |
| | Fred Knibbs, messenger, replacing A. St. Germain, resigned. |
| Peace river | E. W. Arnold, agent, replacing P. R. Garreau, resigned. |
| | A. F. Todd, assistant. New appointment. |
| | J. A. Connery, messenger, replacing F. Chalmers, resigned. |
| Lake Saskatoon | W. Lovell, lineman, replacing R. Harvey, resigned. |
| Moosejaw | M. Kavanagh, agent, Moosejaw, replacing J. Lovelace, resigned. |

NEW OFFICES.

| | |
|---|---|
| Pouce Coupé | J. J. Dever, agent-operator, on Lake Saskatoon-Hudson Hope line. |
| Fort St. John, B.C | G. Wilder, foreman of construction, acting agent temporarily on Lake Saskatoon-Hudson Hope line. |
| Calling river, Alta | E. J. Collins, agent-operator, on Athabasca-Fort McMurray line. |
| Pelican, Alta | W. B. Twichell, agent-operator on Athabasca-Fort McMurray line. |
| House river, Alta | J. H. Bell, agent-operator, on Athabasca-Fort McMurray line. |
| Fort McMurray | C. N. Hayes, agent-operator, on Athabasca-Fort McMurray line. |
| Plamondonville | W. J. Amell, agent-operator, on Athabasca-Lac La Biche line. |

| | Expenditures. |
|---|---|
| Pay lists | $63,344 62 |
| Work on line | 43 25 |
| Horse hire | 157 00 |
| Smithing | 463 45 |
| Postage | 173 54 |
| Oil and electric light | 252 94 |
| Rents | 3,663 40 |
| Sundries | 11,902 59 |
| Fuel | 1,837 96 |
| Horse feed | 5,113 02 |
| | $86,951 78 |

I have the honour to be, sir,

Your obedient servant,

R. C. MACDONALD,

*Superintendent.*

## REPORT No. 9, NORTHWEST LINES.

Edmonton, Alberta, April 17, 1915.

D. H. Keeley, Esq.,
General Superintendent,
Ottawa.

Dear Sir,—I beg to submit herewith a report covering the lines in my inspectorate for the fiscal year ending March 31, 1915.

*Qu'Appelle-Edmonton Section.*—The working of this line during the past year has been most satisfactory. Only minor interruptions have occurred, and as these received prompt attention from the circuit manager and the linemen concerned no serious delay resulted. The work of removing the line from the original location across country to the nearest highway was resumed, much to the satisfaction of the farmers affected. It will be necessary to continue the work until all poles are placed on the road allowances. As these run at right angles, while the original line cut diagonally across country, the length of the line is being added to materially.

*Moosejaw-Wood Mountain line.*—I made a trip of inspection over this line during the year and found that with the exception of the first 12 miles immediately south of Moosejaw the line was in excellent condition. The 12 miles alluded to can be made

to last this year, but as the majority of the poles have already been re-set twice, it will be necessary to rebuild that section in 1916. Between Wood Mountain and Willow Bunch the original line is still maintained. During the past three years, however, settlers have invaded this district, with the result that our line now crosses a large number of farms with numerous gates, rendering a lineman's work difficult. The poles have been re-set so often that the line is very low and they cannot be again re-set. For these reasons it will be necessary to provide for a renewal of poles and to place the line on the highway during the season of 1916. Until then the line can be maintained as at present.

*Edmonton-Hudson Hope line.*—This line was completed to Fort St. John, B.C., (70 miles southeast of Hudson Hope), on March 5, 1915. The building of the extension from Lake Saskatoon was commenced in August under the direction of Foreman Wilder, whose work is deserving of much praise. Should the appropriation for the continuance of the work become available at an early date the completion of the line to Hudson Hope should be reached by June 15 next. This will give a continuous wire from Edmonton, Alberta, to Hudson Hope, B.C., a distance of 748 miles, passing through the most fertile unoccupied portion of Western Canada. The settlers of the districts, built through this season, are prodigal in their thanks to the department for placing them in touch with the outer world. Owing to the war the volume of business done has decreased somewhat, but is still large, and promises to again increase with the return of spring. The Edmonton and Dunvegan railway has built northward towards Peace River Crossing, but is not handling telegraph business. Settlers in great numbers are still pushing onwards far beyond railways, while our line is the one thing that gives them connection with the outside. The importance of this line to the settler, the business man and the country generally cannot be over-estimated.

*Battleford-Isle la Crosse line.*—This line was completed from Battleford to Green Lake, 185 miles, in 1913. During the past year a further 40 miles was erected, when construction was stopped through lack of poles. During the past winter poles for the completion of the line were taken out, and the necessary line material distributed along the route. The line should be completed to Isle la Crosse during the present season. While the district served by this line is not thickly settled as in the case of the Peace River country, the line is yet of great importance to the scattered settlements, as well as to the officers of the law. My attention has been called to various cases where life has been saved through the possibility of summoning medical attendance by telegraph. Much of the country through which the line passes is excellent for agricultural purposes, but towards the northern end there are large areas of sand and muskeg. The linemen have done their work well during the year with the result that there have been practically no interruptions to the working of the line.

*Athabaska-Fort McMurray line.*—At the end of the fiscal year 1913-14 this line had been built to a point 57 miles north of Athabaska. In July, 1914, the work of building was renewed by Foreman Currier and by him carried to a point 105 miles north of Athabaska when he was relieved by Foreman Parry. The latter carried the work on a further distance of 140 miles to Fort McMurray, at which place an office was installed on March 25. When it is considered that a right-of-way for the line had to be cut through heavy woods, and that some miles of muskeg were crossed, considering also how economically the work of construction was carried on, I have no hesitation in saying from a large experience that to Foreman Parry is due the credit of having performed the best piece of telegraph construction yet accomplished in Western Canada

*Athabaska-Lac la Biche line.*—This line, running from Athabaska to Plamondonville in the Lac la Biche district, a distance of 58 miles was constructed during the

past season. Plamondonville being the centre of a well settled district, the line is of great benefit to settlers and the public generally. It is proposed to carry the line a further distance of 12 miles during the present season.

*Southern British Columbia lines.*—Owing to the time taken by my trip to Ottawa and the subsequent pressure of work in the Departmental Agency, I had no opportunity to inspect the lines in southern British Columbia during the past year.

I have the honour to be, sir,

Your obedient servant.

J. S. MACDONALD,

*General Inspector.*

## SOUTHERN BRITISH COLUMBIA.

### REPORT No. 10—KAMLOOPS, OKANAGAN AND GOLDEN-WINDERMERE.

KAMLOOPS, B.C., June 2, 1915.

D. H. KEELY, Esq.,
General Superintendent,
Ottawa, Ont.

DEAR SIR.—I beg to submit the annual report for the following districts, under my supervision, Kamloops, Okanagan and Kootenay, for the year ending March 31, 1915.

For the first five months of the year, the work generally was under the supervision of the superintendent at Vancouver, but in September a change of administration was made and all the territory east of Savonas in British Columbia was placed under the management of the superintendent at Kamloops. The year has been a busy one, 483 miles of new lines built and fifty-nine new offices opened.

On March 31, a continuous service was inaugurated on all the main lines, which allowed all branch lines as well, to get the important centres in cases of sickness or accident at any time of the day or night.

About the same time, a daily bulletin of 400 to 500 words was issued. This as well as the increased services has been greatly appreciated by the outlying districts.

In other small ways the service has been improved by installing switchboards and making connections with other lines, etc.

#### KAMLOOPS-VERNON.

This is the oldest section we have. During the year, 139 miles of it was overhauled and poles re-set, new switchboards installed at Kelowna, Summerland, and Penticton. Two new leads of 2½ miles built into the offices at Vernon, where for several years we were on private company's poles.

The same was the case at Kelowna where we had to build three miles of pole line to reach our office, permission to do so and right of way was arranged for in each case with civic authorities. Through the Okanagan Valley I found we were on 166 poles of private companies. These have been removed and we are now clear and on our own poles. During the year we built an extension of 4 miles of telephone line from Kelowna to Okanagan Mission connected with Kelowna office.

I have visited every office on this section twice during the year and inspected the line, keeping in close touch personally with the work. The section between Penticton and Fairview, 30 miles, will have to be rebuilt during 1915 as the poles have all rotted, being re-set twice since it was first built. Extension at Princeton exchange is required this year to look after the increase of subscribers at that point, also a switchboard is required at Keremeos Centre.

During the year a metallic line was strung between Nicola exchange and Merritt exchange 6 miles, for local use.

NORTH THOMPSON SECTION (68 MILES).

During the year, we had to make this line metallic for 42 miles to overcome the induction from the Kamloops transmission line of 44,000 volts which paralleled us, crossing our line 13 times. To do this work it took all of the appropriation of $4,000 which was voted for overhauling and repairing the whole line, so the upper 26 miles had to be left without repairs last year. As well as having to build the line metallic, we had to build 8½ miles of new line to replace the old line destroyed by the right of way of the Canadian Northern Railway Company the year before. Two new offices were opened on this section and business is very good. The repairs to the upper part of line will have to be done during 1915.

KAMLOOPS TO SAVONAS SECTION (26 MILES).

Very little trouble was experienced on this section last year as it runs through an open country most of the way. One office was opened and connection made at Savonas with the new line built from Ashcroft which now gives us a through telephone service from the Okanagan to the Cariboo.

KAMLOOPS-ROSE HILL SECTION (15 MILES).

This is only a short line but service is given to a thickly settled farming district. Three new offices were opened and a satisfactory business done during the year.

KAMLOOPS-NOTCH HILL-SICAMOUS SECTION (170 MILES).

This is a new line running east from Kamloops built this year. The intention was to connect Kamloops and Revelstoke and all intermediate points but the distance was under-estimated and could only be built as far as Taft, 24 miles from Revelstoke. The balance will be completed next year. The construction of this line is metallic as far as Holmwood on the Vernon line, thence grounded No. 6 iron wire, 30 foot poles were used. Crossings over railways were constructed with double cross arms and guards to comply with rules of the Board of Railway Commissioners. Twenty-one offices were opened between Kamloops and Taft, and this line will serve a very important district including the towns of Chase, Salmon Arm, and Enderby, and many intermediate places.

The total cost was $26,150 or average of $154 per mile.

PRINCETON TO COPPER MOUNTAIN SECTION (14 MILES).

Last year, this line was built south from Princeton to Copper Mountain which is an important mining centre. The construction is a single line No. 10 iron, 30 foot poles. It was opened in January, 1914, with two offices and is connected at Princeton with the local exchange. The total cost was $1,680 or $120 a mile.

KELOWNA TO WHITEMAN'S CREEK (30 MILES).

This line was constructed since last November and gives services to the settlements on the west side of Okanagan lake and is connected with Kelowna office by cable one mile across lake. There are eight offices on this line which were opened in February, 1915. Total cost of construction, $4,885 or $162 per mile.

VERNON-LUMBY SECTION (26 MILES.)

An extension was made to this line during the year. An appropriation was made of $1,500 for a local exchange at Lumby, but, in the meantime, a private company had installed one, so permission was granted to use the amount of money to extend the line 9 miles from Lumby further east. This was appreciated by the settlers there. Two offices were opened in December, 1914. Total cost, $1,437.

FAIRVIEW-MIDWAY SECTION (54 MILES).

The work on these lines was started in October, 1914, and completed and offices opened in February, 1915. The line from Fairview to Boundary 16 miles is of No. 10 copper metallic 25-foot poles and connects there with a short line 4 miles to Oroville, Washington. From Osoyoos to Midway, 38 miles, the line is No. 6 Iron Single grounded system 30-foot poles. There are seven offices opened and we make connection at Midway with the B. C. Telephone Co. Total cost of line, $9,760, or $180 per mile.

NELSON TO TRAIL SECTION (63 MILES).

This line runs south from Nelson to Waneta on the boundary line and a spur of 9 miles to Trail. The work was commenced last October, 1914, and completed in January, 1915. Eleven offices were opened and in operation in February. This is a very important line and connects several towns to Nelson. This work cost $12,369, or $196 per mile.

PROCTOR TO SIDAR SECTION (50 MILES).

This work was started in October, 1914, at Proctor, which is 20 miles east of Nelson. The line runs one mile on the south shore of Kootenay lake, where we laid a submarine cable 3¼ miles across the lake, then it follows the rocky lake shore to Sidar. The line was completed in January and eight offices opened in February. It was the heaviest piece of work we undertook as there were only 12 miles of wagon road the rest of the way, following the rockbound lake shore. It fills a need to the settlers on that side of Kootenay lake. Cost of telephone line, $8,705. Cost of cable, $2,600; total cost, $11,305.

GOLDEN-WINDERMERE SECTION (90 MILES).

Considerable work was done on this line during the year. It was completely rebuilt with a metallic circuit of No. 8 iron wire, 30-foot poles. At Golden, a new exchange was put in and thirty-five local subscribers secured. At Athalmer, a new switchboard was installed and a local exchange including the towns of Windermere, Invermere, and Wilmer, twenty-nine subscribers were secured. On the main line all intermediate offices which previously were subscribers were opened as public call offices and placed on the toll basis as elsewhere throughout the district. The hours of service were extended from 10 to 15 hours giving them a service now from 7·30 a.m., to 10·30, p.m. This work was started in October, 1914, and finished in March, 1915. The total cost including two local exchanges and equipment was $19,000. The improvements on the main line and local exchanges with the increased service have been greatly appreciated by the people in this district.

NAKUSP-EDGEWOOD SECTION (55 MILES).

This section which is under the charge of Mr. L. J. Edwards is now in good working shape. During the year the line was overhauled and considerable guying and repairing were done. At Arrow Park a submarine cable was laid across to West Arrow Park and service extended to the people on that side. At West Demars, another thriving settlement on the west side of the lake, we laid a submarine cable and opened an office. Three new offices were opened during the year and we are looking forward to a considerable increase in business for this section.

In giving you my report I have tried to deal with the different sections in my districts as briefly as possible, giving you the important facts. I did hope to see a larger increase of business and expected to see our revenue take care of all running expenses last year but the financial depression all over the country materially affected the telegraph and telephone business.

Yours faithfully,

W. H. STEVENS,

*Superintendent.*

## REPORT No. 11.—VANCOUVER ISLAND AND YUKON LINES.

VANCOUVER, B.C., May 15, 1915.

D. H. KEELEY, Esq.,
General Superintendent.
Govt. Telegraph Service,
Ottawa, Ont.

DEAR SIR,—I beg to submit herewith my annual report, covering the operation of the Yukon Telegraph system, and the Vancouver Island lines, for the fiscal year 1914-15.

YUKON SYSTEM.

*Main line, Ashcroft to Boundary below Dawson.*

Working conditions on the main line, Ashcroft to Boundary, during the past year, have been all that could be desired. Interruptions were fewer than during any period since the construction of the line, and as breaks were promptly repaired there was little or no delay to traffic.

The volume of traffic has decreased in the past eight months partly due to the general falling off in business, owing to war conditions, and partly by reason of railroad construction work in certain localities being completed. The advent of the Grand Trunk Pacific telegraphs into the field between Prince Rupert and eastern points has also to some extent affected the revenue, as of course that line secures it's share of the business, which formerly passed over our lines exclusively.

General repair gangs were employed on the Atlin-Boundary, Telegraph Creek-Atlin, Hazelton-Aldermere, and Burns Lake-Quesnel sections.

Considerable reconstruction and re-setting of poles was accomplished, especially on the Yukon section, where three separate gangs were employed, and the line thoroughly overhauled, and placed in first class order, from Pike River to the boundary.

Next season, it will be necessary to practically repole the whole of the section between Hazelton and Fifth Cabin, as the poles on this section have been reset so often, that they are now unfit for future service.

Repoling and general reconstruction of the line from 158 Mile House to Quesnel, continued from last season was resumed May 7, and the work completed October 15. The line from Ashcroft to Quesnel has been repoled throughout, and is in first-class order.

HAZELTON-PRINCE RUPERT-STEWART.

The operation of this line during the past year has been satisfactory. Except for an occasional storm, during the fall and winter months, nothing occurred to interrupt or delay business in this section. Considerable repoling and general repairs was done on each local section during the summer months, and the line is now in good order.

ASHCROFT-LILLOOET BRANCH.

This line is in fair order, but as it is several years since any work of a general nature was undertaken, the poles are becoming rather short from frequent re-setting, and a complete re-poling of the line should be undertaken, as soon as an appropriation for this purpose is available.

150 MILE HOUSE-BELLA COOLA.

This line is holding up very well since construction, and only local repair work by the permanent linemen was required to keep it in good order. Several new telephone offices on a commission basis were opened during the past season, and the telephone and telegraph service is much appreciated.

HORSE FLY BRANCH.

This line also requires re-poling, as the poles have been re-set several times, and are becoming too short for further use. The line has been converted into a composite telegraph and telephone line, and several telephone offices on commission, opened.

BARKERVILLE BRANCH.

This line is in good order, and only such work, as was performed by the local linemen, was found necessary, to keep it in that condition.

Hydraulic mining, which is the principal work carried on in this locality, was not prosecuted extensively, the past season, and in consequence the traffic over the line, was not as good as expected.

QUEEN CHARLOTTE ISLANDS.

The operation of the lines on the islands has been very satisfactory. Considerable business is done and the lines have been free from interruptions of a serious nature—breaks from windfalls being the only cause of interruption, and these were promptly repaired by the local linemen.

LILLOOET-LYTTON LINE.

This line is exclusively telephone, and has not been interrupted since its construction last summer. It follows the highway, and the timber along it is large and sound. Several telephones were installed at ranch houses during the year on a rental and commission basis.

LILLOOET-PIONEER MINES TELEPHONE LINE.

For twelve miles out of Lillooet this line followed the Government trail along Seton lake, and with the advent of railroad construction, the line had to be moved up the mountain, as the railroad right-of-way followed the trail. This work was done by the railway company. Now that railroad construction is completed, the P. G. & E. Railway will move our line back to the original location, and give us the free use of one pin on their cross arms along this section of line. They prefer doing this to putting up new poles, and it is to our advantage, as their lineman will look after repairs.

The line over Mission mountain suffered severely from snow and sleet storms, during the early winter months, but prompt repairs were effected, with little delay to service.

Several new offices were opened, and the one at the railway headquarters, Seton lake, and three local railway camps closed with the completion of railway construction.

ASHCROFT EXCHANGE.

Work on this exchange was begun on June 7 and completed July 13.

The exchange is of cable construction, and first-class in every respect.

A switch board with fifty jacks and signals was installed, and thirty-eight telephones were installed for local subscribers, and the service given is highly satisfactory.

The charge for residence telephones is $2.50 per month, and for business houses $3. Where desk sets are installed, instead of wall instruments $3.50 per month is charged.

On all lines, whether exclusively telephone or composite, there are no free telephones, a standard charge of $2.50 per month, in addition to long distance tolls, is made, except on the Fraser-Stuart Lake line, where there are four telephones, and at 150-Mile House, where there are six local telephones, forming a local exchange, the rental is $3 per month.

ASHCROFT-WALHACHIN-SAVONAS CONSTRUCTION.

Construction of this line was begun June 13, 1914, and completed October 23. The distance is 37 miles, with a loop of three miles to Walhachin. The line is No. 8 gauge, iron metallic, and is strung for a distance of 7 miles on the Yukon line poles from Ashcroft to Cache Creek. From that point to Savonas a new pole line was erected. The cross arms on the Yukon line poles had to be changed from two-pin to six-pin to accommodate the new line, and the gains recut, which took considerable time. There are four telephone offices on the line, and with its completion the Yukon system was connected up with the Kamloops-Okanagan system, making a through line, and enabling offices in the Ashcroft exchange and Cariboo district to converse with Kamloops and offices in that district.

VANCOUVER ISLAND LINES.—MAIN LINE VANCOUVER TO VICTORIA.

The operation of this line has been highly satisfactory during the past year; interruptions having been reduced to a minimum, and the service now given between terminal and intermediate points is equal to that given by other commercial lines.

Re-organization and general repairs effected in the last year, has contributed to this result as a consequence, and in spite of the general dullness, the revenue has increased by over $500 in the first four months of 1915, as compared with the corresponding months in 1914.

Some further reconstruction requires to be done next season, especially between Gibson's Landing and Sechelt, where repoling of the entire fourteen miles is an absolute necessity.

ALBERNI-CLAYOQUOT-NOOTKA CONSTRUCTION.

At my last report the construction of this line was still in progress, and a revote being secured, the work was prosecuted to a successful completion of the land line, June 20.

Six cables were successfully laid by July 10, and the line then put in operation. Since that date, very few interruptions have occurred and the line is giving entire satisfaction.

The line is operated as composite telegraph and telephone, with telegraph offices at Ahousat and Estevan, the operators acting as linemen. Telephone offices were installed at Vargas island, Flores island, Hesquiat, Oppitsat, Kakawis and Nootka.

The land line mileage is 74¾ miles, and the cables 13²⁷⁄₇ knots.

Our launch *Alberta*, while engaged as tender, was driven ashore by a sudden and violent storm, and was so badly damaged as to require rebuilding.

TOFINO BUILDING.

A new building was erected at Tofino, giving accommodation to the telegraph and post office service, also living quarters for our agent.

The building is two storied, contains four rooms on the ground floor, and three bed rooms upstairs, is well constructed, and was completed at a cost of $2,450.

REPOLING WILLIAMS HEAD QUARANTINE TELEPHONE LINE.

This line, which is operated in connection with the B. C. telephone exchange at Victoria, was entirely repoled by us, and placed in first-class order.

TELEPHONE EXCHANGE AT GANGES, SALT SPRING ISLAND.

Work on this exchange was commenced August 13, 1914, and completed November 12.

There are 9½ miles of pole line, with nine circuits, and 32 subscribers.

The switchboard installation is similar to Ashcroft.

SALT SPRING-SIDNEY ALTERNATE CONNECTION.

Construction of this line was begun November 13, 1914, and completed January 14, 1915.

A new pole line was erected from Isabella point to Fulford harbour, a distance of 5 miles. From Fulford harbour to Ganges the wire was run on the existing Salt Spring island line, 9 miles, and the wire run into the Ganges exchange. Cables were laid between Isabella point and Pier island; Pier island and Knapp island, and between Knapp island and Schwartz bay. From Schwartz bay to Sydney the land line was strung on the British Columbia Telephone Company's poles, and connection made with their exchange at Sidney.

CAMPBELL RIVER-HOLBERG-CAPE SCOTT EXTENSION.

Work on the construction of this line was commenced July 18, 1914, by a gang working north from Campbell river, under Foreman Porter, and one starting operations July 24 from Alert bay, under line Foreman Thorne.

The gang under Foreman Porter constructed the line from Campbell river to Sayward, a distance of 51 miles, completing same December 2, while the gang under line Foreman Thorne constructed and completed the line from Sayward to Cape Scott, a distance of 151½ miles, March 25, 1915.

A submarine cable of one and a half knots was laid at Beaver cove, and a two and a half knot cable at Quatsino.

A telegraph office was installed at Beaver cove, and telephone offices opened at Rock bay, Sayward, Fort Rupert, Port Hardy, Coal harbour, Quatsino, Holberg, San Josef bay, Fisherman's bay and Cape Scott.

A dwelling for the operator and lineman was erected at Beaver cove, and the launch *Alberta*, after being thoroughly repaired, was placed there for the use of the men, in maintaining the line. A launch for the use of the men, to be stationed at Rock bay, was also purchased, by authority of the Department.

This line follows the shore all the distance from Campbell river to Port Hardy, and as the waters in Seymour narrows and Johnstone's straits, are very strong and dangerous, staunch boats are required to navigate them, and frequently in stormy weather, tugs and freight boats are compelled to seek shelter, and tie up, until the weather moderates. Under these conditions, the work of construction was difficult and dangerous, and great credit is due the foreman, for the excellent and expeditious work accomplished.

Owing to the limited boat and mail service in these districts, telegraph and telephone communication was very badly required, and the new line is much appreciated. Considerable use is being made of the service, and the line has been free from interruptions since construction.

VANCOUVER ISLAND REPAIRS.

Owing to railroad construction along the P. G. & E. Railway, between North Vancouver and White Cliff, a distance of 14 miles, our pole line, upon which there are four wires, was destroyed by blasting operations, and the clearing of the railway right-of-way. When this work was completed, a gang was started from North Vancouver, and the entire line repoled and cross armed, and is now in good order, at the same time, advantage was taken to give the residents of Bowen island telephone connection with the British Columbia telephone subscribers on the Vancouver city exchange, and long distance circuits.

A spare piece of cable on hand was laid between White Cliff and Snug Cove on Bowen island, and a repeating coil installed at the end of the metallic circuit at White Cliff. This service is now in operation, and is working satisfactorily, later it is hoped to extend the service to Gibson's Landing and Sechelt. A small piece of spare cable was also used, to give connection between Britannia Beach, and the B. C. Sulphite Company's plant at Mill creek, on Howe sound.

EXTENSION TOFINO TO PTARMIGAN MINE-BEAR RIVER.

Construction of this line was begun September 9, 1914, and completed January 17, 1915. Advantage was taken of the existing line from a point six miles from Tofino to Mosquito harbour to use this wire as part of the line to Bear river, and the line was extended to Tofino. The Leonard island line, which tapped the main line 2½ miles from Tofino was also extended to Tofino, so that all lines now terminate at Tofino, and trouble on one does not affect the others. A branch, 4½ miles, was constructed from Bear river line to the Kalappa mines. Twenty-nine miles of wire, 860 oak brackets, and 960 porcelain insulators were used in constructing the Bear river line, and making the extensions noted above. In addition, one quarter of a knot of submarine cable was laid across Race narrows.

Under separate cover, I am forwarding the comparative statement, for the Yukon system.

Yours very truly,

J. T. PHELAN,
*Superintendent.*

# YUKON TELEGRAPHS.

## ASHCROFT TO BOUNDARY—MAIN LINE.

COMPARATIVE Statement of Revenue for the Years ending March 31, 1914, and March 31, 1915.

| Offices. | Fiscal Year, 1913-1914. | | | Fiscal Year, 1914-1915. | | | SUMMARY. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Messages. | | | | Revenue. | |
| | Messages. | | Revenue. | Messages. | | Revenue. | Increase. | | Decrease. | | Increase. | Decrease. |
| | Sent. | Received. | $ cts. | Sent. | Received. | $ cts. | Sent. | Received. | Sent. | Received. | $ cts. | $ cts. |
| Ashcroft, B.C. | 39,685 | 51,648 | 34,306 55 | 35,522 | 42,744 | 25,550 34 | | | 4,163 | 8,901 | | 8,756 19 |
| Aldermere, B.C. | 1,110 | 840 | 1,007 32 | 400 | 377 | 385 38 | | | 710 | 463 | | 621 94 |
| Anders, B.C. | 99 | 74 | 52 46 | 9 | 10 | 31 80 | | | 90 | 64 | | 20 66 |
| Atlin, B.C. | 985 | 706 | 2,264 67 | 936 | 780 | 2,572 99 | | | 49 | | 308 32 | |
| Big Salmon, Y.T. | 58 | 36 | 114 35 | 17 | 20 | 14 35 | | | 41 | 16 | | 100 00 |
| Blackwater, B.C. | 11,697 | 9,804 | 8,594 85 | 8,920 | 7,844 | 6,291 59 | | | 2,777 | 1,960 | | 2,303 26 |
| Bobtail Lake, B.C. | 104 | 62 | 61 90 | 51 | 20 | 40 04 | | | 53 | 42 | | 21 86 |
| Boundary, Y.T. | 2,102 | 1,593 | | 1,400 | 1,001 | | | | 702 | 592 | | |
| Bulkle Summit, B.C. | 592 | 435 | 900 32 | 180 | 99 | 231 75 | | | 412 | 336 | | 668 57 |
| Burns' Lake, B.C. | 391 | 349 | 461 75 | 171 | 156 | 160 75 | | | 228 | 193 | | 304 00 |
| Carcross, Y.T. | 289 | 279 | 329 10 | 231 | 301 | 278 64 | | 22 | 5 | | | 50 46 |
| Carmack, Y.T. | 246 | 199 | 410 36 | 232 | 245 | 327 24 | | 46 | 14 | | | 83 12 |
| Choates, B.C. | 13 | 3 | 11 33 | 61 | 21 | 51 41 | 48 | 18 | | | 40 08 | |
| Clinton, B.C. | 2,255 | 1,916 | 1,354 23 | 3,049 | 2,516 | 1,779 99 | 794 | 600 | | | 425 76 | |
| Coffee Creek, Y.T. | 120 | 67 | 150 45 | 44 | 37 | 18 63 | | | 76 | 30 | | 131 82 |
| Dawson, Y.T. | 6,235 | 5,544 | 29,976 13 | 5,577 | 5,065 | 28,048 94 | | | 658 | 479 | | 1,927 19 |
| Decker Lake, B.C. | 551 | 315 | 581 96 | Closed. | Closed. | Closed. | | | 551 | 313 | | 581 96 |
| Dougherty, B.C. | 109 | 90 | 39 60 | 59 | 66 | 48 44 | | | 50 | 24 | 8 84 | |
| Echo Lake, B.C. | 9 | 6 | 16 70 | 8 | 4 | 16 38 | | | 1 | 2 | | 32 |
| Eighth Cabin, B.C. | 4 | 3 | 5 61 | 5 | 4 | 8 30 | 1 | 1 | | | 2 69 | |
| Fifth Cabin, B.C. | 76 | 41 | 59 65 | 36 | 20 | 33 70 | | | 40 | 21 | | 25 95 |
| First Cabin, B.C. | 23 | 12 | 14 51 | 13 | 9 | 6 00 | | | 10 | 3 | | 8 51 |
| Fort Fraser, B.C. | 2,977 | 2,243 | 3,264 54 | 1,986 | 1,855 | 2,415 45 | | | 991 | 388 | | 849 09 |
| Fort Selkirk, Y.T. | 161 | 144 | 234 15 | 112 | 107 | 66 75 | | | 52 | 37 | | 167 40 |
| Forty Mile, Y.T. | 224 | 175 | 219 97 | 168 | 186 | 197 37 | | 11 | 56 | | | 22 60 |
| Fourth Cabin, B.C. | 31 | 23 | 17 29 | 5 | 75 | 4 10 | | | 26 | 18 | | 13 19 |
| Fraser Lake, B.C. | 134 | 147 | 199 01 | 71 | 60 | 90 10 | | | 63 | 87 | | 108 91 |
| Government Ranch, B.C. | 115 | 73 | 139 05 | Closed. | Closed. | Closed. | | | 115 | 73 | | 139 05 |
| Hazelton, B.C. | 3,418 | 2,984 | 3,906 41 | 2,078 | 1,822 | 2,201 12 | | | 1,340 | 1,162 | | 1,705 29 |
| Hootalinqua, Y.T. | 105 | 83 | 48 89 | 114 | 66 | 38 40 | 9 | | | 17 | | 10 49 |
| Iskoot, B.C. | 1 | | 2 00 | 6 | 3 | 6 05 | 5 | 3 | | | 4 05 | |
| Kispiox | 65 | 72 | 53 51 | 28 | 38 | 18 81 | | | 37 | 34 | | 34 70 |
| Lower Laberge, Y.T. | 157 | 121 | 131 55 | 136 | 124 | 121 03 | | 3 | 21 | | | 10 52 |
| Lynes, B.C. | 129 | 83 | 58 45 | 102 | 87 | 74 20 | | 4 | 27 | | 15 75 | |
| Moffat, B.C. | 63 | 13 | 36 06 | 21 | 7 | 40 66 | | | 42 | 6 | 4 60 | |
| Moricetown, B.C. | 112 | 96 | 79 93 | 14 | 22 | 5 45 | | | 98 | 74 | | 74 48 |
| Nahlin, B.C. | 51 | 38 | 30 36 | 31 | 20 | 35 95 | | | 20 | 18 | 5 59 | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nakina, B.C. | 12 | 15 | 15 67 | 19 | 10 | 22 61 | 7 | | | 5 | 6 94 | |
| Nechaco, BC. | 332 | 251 | 390 97 | 351 | 394 | 321 96 | 19 | 143 | | | 30 99 | |
| Ninth Cabin, B.C. | 33 | 14 | 83 56 | 25 | 16 | 46 71 | | 2 | 8 | | | 36 85 |
| North Bulkley, B.C. | 30 | 21 | 16 49 | Closed. | Closed. | Closed. | | | 30 | 21 | | 16 49 |
| Ogilvie, Y.T. | 123 | 34 | 55 47 | 47 | 18 | 61 50 | | | 76 | 16 | 6 03 | |
| 12 Mile House, B.C. | | | | 94 | 55 | 63 90 | 91 | 55 | | | 63 90 | |
| 51 Mile Camp, B.C. | | | | 50 | 53 | 122 00 | 50 | 53 | | | 122 00 | |
| 59 Mile House, B.C. | 72 | 44 | 25 71 | 155 | 210 | 160 06 | 83 | 166 | | | 74 38 | |
| 61 Mile Camp, B.C. | | | | | 2 | 30 00 | | 2 | | | 30 00 | |
| 70 Mile House, B.C. | 274 | 167 | 203 78 | 394 | 287 | 166 65 | 120 | 120 | | | | 37 13 |
| 74 " | 103 | 105 | 30 86 | 40 | 35 | 43 35 | | | 63 | 70 | 12 45 | |
| 83 " | 171 | 104 | 62 90 | 129 | 80 | 75 69 | | | 42 | 24 | 12 79 | |
| 100 " | 209 | 115 | 86 52 | 148 | 98 | 95 74 | | | 61 | 17 | 9 22 | |
| 105 " | 270 | 160 | 118 44 | 304 | 204 | 177 72 | 34 | 44 | | | 59 28 | |
| 108 " | 14 | 6 | 12 28 | 87 | 38 | 67 05 | 73 | 32 | | | 54 77 | |
| 115 " | 413 | 261 | 165 18 | 300 | 197 | 161 32 | | | 143 | 64 | | 3 86 |
| 118 " | | | | 29 | 12 | 37 18 | 29 | 12 | | | 37 18 | |
| 122 " | 126 | 72 | 52 69 | 221 | 176 | 116 16 | 95 | 104 | | | 63 47 | |
| 134 " | 74 | 69 | 34 82 | 54 | 22 | 19 44 | | | 20 | 47 | 14 62 | |
| 141 " | 356 | 262 | 218 86 | 454 | 331 | 226 47 | 98 | 69 | | | 7 61 | |
| 150 " | 2,454 | 1,977 | 1,508 78 | 2,592 | 2,473 | 1,816 82 | 138 | 496 | | | 308 01 | |
| 153 " | 66 | 96 | 38 01 | 114 | 148 | 83 21 | 48 | 52 | | | 45 20 | |
| 158 " | 100 | 66 | 51 49 | 61 | 49 | 66 24 | | | 36 | 17 | 14 75 | |
| Pollard, B.C. | | | | 40 | 31 | 28 08 | 40 | 31 | | | 28 08 | |
| Quesnel, B.C. | 4,640 | 4,432 | 3,771 11 | 5,075 | 4,297 | 4,255 14 | 135 | | | 135 | 484 33 | |
| Rankins 59, B.C. | | | | | | 22 50 | | | | | 22 50 | |
| Rowed, B.C. | 20 | 6 | 22 75 | 84 | 42 | 71 30 | 64 | 36 | | | 48 55 | |
| Second Cabin, B.C. | 23 | 14 | 15 80 | 13 | 6 | 8 29 | | | 10 | 8 | | 7 51 |
| Seventh Cabin, B.C. | 17 | 4 | 10 85 | 24 | 10 | 15 55 | 7 | 6 | | | 4 70 | |
| Sheadys Camp, B.C. | | | | | | 111 50 | | | | | 111 50 | |
| Shepherd's Camp, B.C. | 22 | 15 | 14 77 | 15 | 13 | 32 75 | | | 7 | 2 | 17 98 | |
| Shesley, B.C. | 34 | 23 | 27 51 | 29 | 19 | 28 39 | | | 5 | 4 | 88 | |
| Sixth Cabin, B.C. | 18 | 18 | 32 19 | 9 | 11 | 7 45 | | | 9 | 7 | | 24 74 |
| Smithers, B.C. | 111 | 95 | 119 77 | 1,271 | 1,322 | 1,560 20 | 1,160 | 1,227 | | | 1,440 13 | |
| Soda Creek, B.C. | 1,299 | 988 | 610 62 | 2,038 | 1,609 | 1,566 83 | 739 | 621 | | | 956 21 | |
| South Bulkley, B.C. | 157 | 105 | 195 64 | 60 | 45 | 43 18 | | | 97 | 60 | | 152 46 |
| Stella, B.C. | 597 | 391 | 670 26 | 551 | 444 | 507 80 | | 53 | 46 | | | 162 46 |
| Stewart River, Y.T. | 262 | 178 | 317 89 | 88 | 83 | 67 79 | | | 174 | 95 | | 250 10 |
| Stuart Lake, B.C. | 190 | 151 | 285 86 | 195 | 151 | 255 46 | 5 | | | | | 30 40 |
| Tagish, Y.T. | 8 | 9 | 6 88 | 29 | 22 | 19 58 | 21 | 13 | | | 12 70 | |
| Telegraph Creek, B.C. | 359 | 400 | 746 85 | 336 | 451 | 1,031 16 | | 51 | 23 | | 281 31 | |
| Telkwa, B.C. | 1,957 | 1,899 | 2,564 00 | 474 | 416 | 614 56 | | | 1,483 | 1,483 | | 1,949 44 |
| Third Cabin, B.C. | 14 | 9 | 15 96 | 14 | 14 | 36 26 | | 5 | | | 20 30 | |
| 25 Mile Cabin, B.C. | 1 | | 25 | 3 | 2 | 5 32 | 2 | 2 | | | 5 07 | |
| White Horse, Y.T. | 3,016 | 3,359 | 8,628 78 | 2,570 | 2,865 | 6,674 90 | | | 446 | 494 | | 1,953 88 |
| White River, Y.T. | 210 | 157 | 259 03 | 46 | 26 | 45 07 | | | 164 | 131 | | 204 96 |
| Windts, B.C. | 43 | 25 | 31 05 | 48 | 44 | 76 83 | 5 | 19 | | | 45 78 | |
| Yorstons, B.C. | 92 | 116 | 45 80 | 54 | 42 | 61 26 | | | 38 | 74 | 15 46 | |
| Yukon Crossing, Y.T. | 94 | 81 | 75 82 | 121 | 134 | 119 99 | 27 | 53 | | | 41 17 | |
| Totals | 92,948 | 96,629 | 110,670 87 | 80,651 | 82,748 | 92,431 32 | 4,250 | 4,249 | 16,547 | 18,130 | 5,332 26 | 23,571 81 |

## YUKON TELEGRAPHS—*Continued.*

### HAZELTON-PRINCE RUPERT BRANCH.

COMPARATIVE Statement of Revenue, for the Years ending March 31, 1914, and March 31, 1915—*Continued.*

| Offices. | Fiscal Year, 1913-1914. | | | Fiscal Year, 1914-1915. | | | SUMMARY. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Messages. | | | | Revenue. | |
| | Messages. | | Revenue. | Messages. | | Revenue. | Increase. | | Decrease. | | Increase | Decrease. |
| | Sent. | Received | $ cts. | Sent. | Received. | $ cts. | Sent. | Received. | Sent. | Received. | $ cts. | $ cts. |
| Cassiar, B.C. | 41 | 47 | 63 58 | 67 | 48 | 104 54 | 26 | 1 | | | 40 96 | |
| Cedar Vale, B.C. | 77 | 74 | 69 04 | 47 | 61 | 37 12 | | | 30 | 13 | | 22 92 |
| Copper River, B.C. | 76 | 61 | 44 77 | 32 | 23 | 18 68 | | | 44 | 38 | | 26 09 |
| Digby Island, B.C. | 1,351 | 1,012 | | 1,315 | 553 | | | | 39 | 459 | | |
| Georgetown, B.C. | 49 | 57 | 123 95 | 22 | 32 | 93 38 | | | 27 | 25 | | 30 57 |
| Graveyard Pt., B.C. | 37 | 32 | 54 22 | 9 | 11 | 7 85 | | | 28 | 21 | | 46 37 |
| Hayesfort, B.C. | 745 | 577 | 1,081 47 | 479 | 411 | 563 00 | | | 266 | 166 | | 518 47 |
| Hole-in-Wall, B.C. | 8 | 2 | 3 40 | 5 | 2 | 3 25 | | | 3 | | | 15 |
| Inverness, B.C. | 101 | 91 | 166 09 | 133 | 82 | 135 18 | 32 | | | 9 | 29 09 | |
| Kitselas, B.C. | 309 | 260 | 269 19 | 161 | 168 | 153 78 | | | 148 | 92 | | 115 41 |
| Kitwangar, B.C. | 223 | 137 | 186 47 | 228 | 178 | 187 86 | 5 | 41 | | | 1 39 | |
| Lorne Creek, B.C. | 52 | 47 | 45 41 | 240 | 140 | 238 30 | 188 | 93 | | | 192 89 | |
| McHughs, B.C. | 5 | 4 | 1 40 | 2 | | 1 73 | | | 3 | 4 | 33 | |
| New Hazelton, B.C. | 2,288 | 2,107 | 2,812 15 | 1,025 | 1,141 | 1,377 75 | | | 1,263 | 966 | | 1,434 40 |
| North Pacific, B.C. | 63 | 45 | 95 79 | 66 | 44 | 106 24 | 3 | | | 1 | 10 45 | |
| Pacific, B.C. | 71 | 43 | 59 25 | 107 | 57 | 92 31 | 36 | 14 | | | 33 06 | |
| Port Edward, B.C. | 58 | 56 | 34 80 | 8 | 20 | 10 93 | | | 50 | 36 | | 23 87 |
| Port Essington, B.C. | 124 | 150 | 143 92 | 280 | 262 | 379 44 | 156 | 112 | | | 235 52 | |
| Port Simpson, B.C. | 439 | 366 | 443 14 | 433 | 435 | 486 24 | | 69 | 6 | | 43 10 | |
| Prince Rupert, B.C. | 17,247 | 15,763 | 24,716 06 | 15,278 | 15,031 | 21,880 50 | | | 1,969 | 732 | | 2,835 56 |
| Skeena Crossing, B.C. | | | | 408 | 349 | 406 36 | 408 | 349 | | | 406 36 | |
| Telegraph Point, B.C. | 20 | 14 | 30 23 | 18 | 15 | 31 07 | | 1 | 2 | | 84 | |
| Terrace, B.C. | 573 | 510 | 496 23 | 533 | 566 | 542 95 | | 56 | 40 | | 46 73 | |
| Tramville, B.C. | | | | 73 | 58 | 72 01 | 73 | 58 | | | 72 01 | |
| Totals | 23,960 | 21,455 | 30,871 56 | 20,969 | 19,687 | 26,930 48 | 927 | 794 | 3,918 | 2,562 | 1,112 73 | 5,053 81 |

## ASHCROFT-LILLOOET BRANCH.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cache Creek, B.C. | | | | 28 | 21 | 25 04 | 28 | 21 | | | 25 04 | |
| Carson, B.C. | | | | 54 | 52 | 44 21 | 54 | 52 | | | 44 21 | |
| Calder, B.C. | | | | 15 | 17 | 19 30 | 15 | 17 | | | 19 30 | |
| Clark's Creek, B.C. | | | | 111 | 33 | 58 70 | 111 | 33 | | | 58 70 | |
| Engineers Camp, B.C. | | | | 48 | 9 | 184 20 | 48 | 9 | | | 184 20 | |
| Fountain Ranch, B.C. | | | | 43 | 42 | 38 47 | 43 | 42 | | | 38 47 | |
| Hat Creek, B.C. | 225 | 203 | 91 40 | 134 | 171 | 81 69 | | | 91 | 32 | | 9 71 |
| Lillooet, B.C. | 5,293 | 4,949 | 3,654 83 | 3,360 | 3,513 | 2,342 48 | | | 1,933 | 1,436 | | 1,312 35 |
| Marble Canyon, B.C. | | | | 1 | 0 | 12 50 | 1 | | | | 12 50 | |
| McAlpines, B.C. | | | | 73 | 32 | 168 77 | 73 | 32 | | | 168 77 | |
| Pavilion, B.C. | 289 | 203 | 140 42 | 195 | 182 | 108 68 | | | 94 | 21 | | 31 74 |
| Rankin Camp 1, B.C. | 91 | 91 | 112 50 | 21 | 26 | 45 70 | | | 70 | 65 | | 66 80 |
| " " 3, B.C. | 2 | 5 | 112 50 | | | 7 50 | | | 2 | 5 | | 105 00 |
| " " 6, B.C. | 33 | 34 | 113 00 | 1 | 10 | 21 90 | | | 32 | 24 | | 91 10 |
| " " 7, B.C. | | | | 6 | 8 | 50 75 | 6 | 8 | | | 50 75 | |
| Totals ... | 5,933 | 5,485 | 4,224 65 | 4,090 | 4,116 | 3,209 89 | 379 | 214 | 2,222 | 1,583 | 601 94 | 1,616 70 |

## LILLOOET—PIONEER BRANCH.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Coronation, B.C. | 187 | 51 | 85 40 | 26 | 14 | 50 97 | | | 161 | 37 | | 34 43 |
| Fairhaven, B.C. | 142 | 60 | 48 03 | 53 | 13 | 46 73 | | | 89 | 47 | | 1 30 |
| Golden Dream, B.C. | 4 | 7 | 13 25 | 71 | 13 | 91 65 | 67 | 6 | | | 78 40 | |
| Hansen, B.C. | 21 | 3 | 15 50 | 58 | 12 | 49 05 | 37 | 9 | | | 33 55 | |
| Mission Landing, B.C. | 0 | 1 | | | | | | | | 1 | | |
| Pioneer, B.C. | 51 | 0 | 26 25 | | 3 | 30 00 | | 3 | 51 | | 3 75 | |
| Portage, B.C. | 89 | 64 | 46 91 | | | | | | 89 | 64 | | 46 91 |
| Seaton Lake, B.C. | 1,000 | 889 | 615 00 | 402 | 337 | 257 77 | | | 598 | 552 | | 357 23 |
| Tyaughton, B.C. | 114 | 34 | 38 00 | 61 | 11 | 48 74 | | | 53 | 23 | 10 75 | |
| Wayside, B.C. | 52 | 1 | 26 50 | 7 | 3 | 35 25 | | 2 | 45 | | 8 75 | |
| Totals ... | 1,660 | 1,110 | 914 84 | 678 | 406 | 610 17 | 104 | 20 | 1,086 | 724 | 135 20 | 439 87 |

## YUKON TELEGRAPHS—*Continued.*

COMPARATIVE Statement of Revenue, for the Years ending March 31, 1914, and March 31, 1915—*Continued.*

### LILLOOET—LYTTON BRANCH.

| Offices. | Fiscal Year, 1913-1914. | | | Fiscal Year, 1914-1915. | | | Summary. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Messages. | | | | Revenue. | |
| | Messages. | | Revenue. | Messages. | | Revenue. | Increase. | | Decrease. | | Increase. | Decrease. |
| | Sent. | Received. | $ cts. | Sent. | Received. | $ cts. | Sent. | Received. | Sent. | Received. | $ cts. | $ cts. |
| Dickeys, B.C. | 0 | 3 | 16 25 | 13 | 5 | 33 56 | 13 | 2 | | | 17 25 | |
| Earlscourt, B.C. | | | | 1 | 1 | 21 00 | 1 | 1 | | | 21 00 | |
| Halfway House, B.C. | 35 | 38 | 22 50 | 30 | 5 | 37 00 | | | 5 | 33 | 14 50 | |
| Jones, B.C. | 0 | 4 | 16 25 | 4 | 6 | 31 30 | 4 | 2 | | | 15 05 | |
| Lochores, B.C. | 5 | 10 | 15 00 | 9 | 3 | 32 25 | 4 | | | 7 | 17 25 | |
| Lytton, B.C. | 408 | 233 | 103 85 | 393 | 356 | 105 24 | | 123 | 15 | | 1 39 | |
| McCarty, B.C. | 4 | 5 | 11 25 | 5 | 6 | 23 10 | 1 | 1 | | | 11 85 | |
| Maher, B.C. | 6 | 8 | 15 25 | 1 | 4 | 30 25 | | | 5 | 4 | 15 00 | |
| Ruddocks, B.C. | 1 | 14 | 14 00 | 5 | 3 | 31 00 | 4 | | | 11 | 17 00 | |
| LaRochelle | | | | 11 | 7 | 32 00 | 11 | 7 | | | 32 00 | |
| Totals | 459 | 315 | 214 35 | 472 | 396 | 376 64 | 38 | 136 | 25 | 55 | 162 29 | |

### 150 MILE HOUSE—QUESNEL FORKS BRANCH.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Harper's Camp, B.C. | 332 | 283 | 207 33 | 276 | 224 | 173 45 | | | 56 | 59 | | 33 88 |
| Hydraulic, B.C. | 37 | 80 | 27 57 | 3 | 20 | 2 60 | | | 34 | 60 | | 24 97 |
| Meiss Lake, B.C. | | | | 1 | 7 | 12 59 | 1 | 7 | | | 12 59 | |
| Quesnel Forks, B.C. | 343 | 242 | 239 79 | 429 | 405 | 392 47 | 86 | 163 | | | 152 68 | |
| Roses, B.C. | 14 | 17 | 15 51 | 56 | 41 | 51 54 | 42 | 24 | | | 36 03 | |
| Wiggins, B.C. | 19 | 17 | 14 91 | 26 | 26 | 43 13 | 7 | 9 | | | 28 22 | |
| Totals | 745 | 639 | 505 11 | 791 | 723 | 675 78 | 136 | 203 | 90 | 119 | 229 52 | 58 85 |

## 150 MILE HOUSE—BELLA COOLA BRANCH.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alexis Creek B.C. | 230 | 133 | 183 45 | 101 | 115 | 111 82 | | | 129 | 18 | | 71 63 | |
| Anaham Lake, B.C. | | | | 19 | 12 | 40 49 | 19 | 12 | | | 40 49 | | |
| Armstrong, B.C. | | | | 2 | | 12 55 | 2 | | | | 12 55 | | |
| Atnarko, B.C. | 51 | 24 | 39 12 | 31 | 11 | 21 55 | | | 20 | 13 | | 17 57 | |
| Bayliff, B.C. | 38 | 17 | 64 91 | 20 | 12 | 39 50 | | | 18 | 5 | | 25 41 | |
| Beaumont, B.C | 2 | | 3 75 | 8 | 3 | 36 92 | 6 | 3 | | | 32 27 | | |
| Becher, B.C. | 310 | 363 | 264 97 | 210 | 226 | 182 70 | | | 100 | 137 | | 82 27 | |
| Bella Coola, B.C. | 659 | 545 | 1,113 29 | 351 | 486 | 707 47 | | | 308 | 59 | | 405 82 | |
| Borland, B.C. | 8 | 12 | 13 90 | 55 | 46 | 58 25 | 47 | 31 | | | 44 35 | | |
| Canoe Crossing, B.C. | 2 | 5 | 2 05 | 3 | 1 | 2 00 | 1 | | | 4 | | 5 | |
| Chilanco Crossing, B.C. | 4 | 1 | 44 00 | 2 | 1 | 30 50 | | | 2 | | | 13 50 | |
| Chimney Creek, B.C. | | | | 9 | 4 | 11 75 | 9 | 4 | | | 11 75 | | |
| Firvale, B.C. | | | | 4 | 1 | 31 63 | 4 | 1 | | | 31 63 | | |
| Hanceville, B.C. | 153 | 109 | 179 57 | 100 | 100 | 112 22 | | | 53 | 9 | | 67 35 | |
| Kleena Kleene, B.C. | | | | 1 | 1 | 11 71 | 1 | 1 | | | 11 71 | | |
| Kluna Kluna, B.C | 48 | 42 | 42 84 | 8 | 8 | 16 15 | | | 40 | 34 | | 26 69 | |
| Lees, B.C. | 137 | 65 | 195 36 | 158 | 73 | 217 90 | 21 | 8 | | | 22 54 | | |
| Lownesses, B.C. | 17 | 4 | 29 20 | 20 | 5 | 39 65 | 3 | 1 | | | 10 45 | | |
| Macauley, B.C. | | | | 9 | 3 | 28 25 | 9 | 3 | | | 28 25 | | |
| Martins, B.C | 1 | 2 | 6 60 | 45 | 27 | 43 99 | 44 | 25 | | | 37 39 | | |
| Marvin, B.C. | | | 12 50 | | | 30 00 | | | | | 17 50 | | |
| Newton, B.C. | | | | 8 | 6 | 49 11 | 8 | 6 | | | 49 11 | | |
| Onward Ranch, B.C. | 118 | 153 | 119 50 | 132 | 166 | 133 59 | 14 | 13 | | | 14 09 | | |
| Pyper, B.C | 1 | 2 | 6 35 | 45 | 40 | 68 78 | 44 | 38 | | | 62 43 | | |
| Redstone, B.C. | | | | 13 | 14 | 18 80 | 13 | 4 | | | 18 80 | | |
| Tatla Lake, B.C. | 9 | 13 | 42 34 | 17 | 149 | 154 97 | 8 | 136 | | | 112 63 | | |
| Williams' Lake, B.C | 26 | 64 | 58 25 | 33 | 47 | 51 22 | 7 | | | 17 | | 7 03 | |
| Youngs, B.C. | | | 5 00 | 7 | 5 | 34 61 | 7 | 5 | | | 29 61 | | |
| Totals | 1,814 | 1,554 | 2,426 95 | 1,411 | 1,552 | 2,297 18 | 267 | 291 | 670 | 296 | 587 55 | 717 32 | |

## ASHCROFT—SAVONAS BRANCH.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| McAbees', B.C. | | | | 5 | 4 | 17 20 | 5 | 4 | | | 17 20 | | |
| Semlin, B.C. | | | | 11 | 17 | 19 20 | 11 | 17 | | | 19 20 | | |
| Walhachin, B.C | | | | 139 | 165 | 64 52 | 139 | 165 | | | 64 52 | | |
| Totals | | | | 155 | 186 | 100 92 | 155 | 186 | | | 100 92 | | |

## YUKON TELEGRAPHS—*Continued*

### QUESNEL—BARKERVILLE BRANCH.

COMPARATIVE Statement of Revenue for the Years ending March 31, 1914, and March 31, 1915.—*Continued.*

| Offices | Fiscal Year, 1913-1914. | | | Fiscal Year, 1914-1915. | | | SUMMARY. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Messages. | | | | Revenue. | |
| | Messages. | | Revenue. | Messages. | | Revenue. | Increase. | | Decrease. | | Increase. | Decrease. |
| | Sent. | Received. | $ cts. | Sent. | Received. | $ cts. | Sent. | Received. | Sent. | Received. | $ cts. | $ cts. |
| Barkerville, B.C | 733 | 715 | 530 11 | 1,081 | 446 | 518 23 | 348 | | | 269 | | 11 88 |
| Cottonwood, B.C | 75 | 60 | 36 90 | 27 | 45 | 41 20 | | | 48 | 15 | 4 30 | |
| Leckes, B.C | 2 | 3 | 8 54 | | | 15 00 | | | 2 | 3 | 6 46 | |
| Stanley, B.C | 286 | 205 | 359 11 | 215 | 155 | 294 53 | | | 71 | 50 | | 64 58 |
| Wingdam, B.C | 76 | 93 | 106 06 | 16 | 20 | 38 75 | | | 60 | 73 | | 67 30 |
| Totals | 1,172 | 1,076 | 1,040 71 | 1,339 | 666 | 907 71 | 348 | | 181 | 410 | 10 76 | 143 76 |
| HOOTALINQUA—LIVINGSTONE CREEK, Y.T. BRANCH. | | | | | | | | | | | | |
| Livingstone Creek, Y.T | 45 | 15 | 47 50 | 59 | 55 | 77 67 | 14 | 40 | | | 30 17 | |
| Mason's Landing, Y.T | 1 | | | | | | | | 1 | | | |
| Totals | 46 | 15 | 47 50 | 59 | 55 | 77 67 | 14 | 40 | 1 | | 30 17 | |
| TERRACE—STEWART, B.C. BRANCH. | | | | | | | | | | | | |
| Aiyansh, B.C | 162 | 121 | 204 31 | 144 | 122 | 196 51 | | 1 | 18 | | | 4 83 |
| Alice Arm, B.C | 52 | 49 | 48 46 | 61 | 60 | 108 41 | 9 | 11 | | | 59 95 | |
| Anyox, B.C | 1,284 | 1,044 | 2,689 02 | 1,443 | 1,117 | 4,337 16 | 159 | 73 | | | 1,648 14 | |
| Maple Bay, B.C | 6 | 3 | 9 35 | 20 | 13 | 33 34 | 14 | 10 | | | 23 99 | |
| Rosswood, B.C | 43 | 46 | 31 41 | 45 | 49 | 27 74 | 2 | 3 | | | | 3 70 |
| Stewart, B.C | 669 | 549 | 1,255 73 | 384 | 487 | 749 35 | | | 285 | 62 | | 506 38 |
| Swamp Point, B.C | 1 | | 21 83 | | | 30 00 | | | 1 | | 8 17 | |
| Totals | 2,217 | 1,812 | 4,257 17 | 2,097 | 1,848 | 5,482 51 | 184 | 98 | 304 | 62 | 1 740 25 | 514 91 |

## QUEEN CHARLOTTE ISLAND LINE.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dead Tree Point, B.C | 231 | 290 | 80 47 | 450 | 679 | 148 13 | 219 | 389 | | | | 67 66 | |
| Delkatlah, B.C | 3 | 1 | 8 25 | | | | | | 3 | | 1 | | 8 25 |
| Ferguson, B.C | 3 | 0 | 10 75 | | | 2 50 | | | 3 | | | | 8 25 |
| Graham Centre, B.C | 16 | 10 | 27 13 | 29 | 19 | 47 15 | 13 | 9 | | | | 18 02 | |
| Indian Village, B.C | 13 | 11 | 12 59 | 38 | 16 | 35 27 | 25 | 5 | | | | 22 68 | |
| Lawn Hill, B.C | 7 | 6 | 4 68 | 57 | 47 | 76 30 | 50 | 41 | | | | 71 62 | |
| Massett, B.C | 197 | 182 | 187 25 | 492 | 561 | 410 63 | 295 | 379 | | | | 223 38 | |
| Meyer Lake, B.C | | | 7 50 | 0 | 0 | 2 50 | | | | | | | 5 00 |
| Miller Creek, B.C | | | 85 | 3 | 3 | 19 92 | 3 | 3 | | | | 19 07 | |
| Nadu, B.C | 3 | 6 | 10 75 | 17 | 19 | 36 00 | 14 | 13 | | | | 25 25 | |
| Port Clements, Queenstown, B.C | 142 | 99 | 103 01 | 398 | 205 | 215 93 | 256 | 106 | | | | 112 92 | |
| Queen Charlotte City, B.C | 98 | 96 | 129 83 | 251 | 204 | 2 5 98 | 156 | 108 | | | | 76 15 | |
| Skidegate, B.C | 15 | 32 | 30 90 | 47 | 101 | 57 24 | 32 | 69 | | | | 26 34 | |
| Ti-Ell, B.C | 7 | 6 | 5 50 | 61 | 30 | 24 00 | 54 | 24 | | | | 18 50 | |
| Tow Hill, B.C | 20 | 3 | 20 96 | 59 | 29 | 69 14 | 39 | 26 | | | | 48 18 | |
| White Creek, B.C | | | 1 25 | 1 | 0 | 17 19 | 1 | | | | | 15 94 | |
| Woden, B.C | 17 | 14 | 28 05 | 61 | 44 | 79 32 | 44 | 30 | | | | 51 27 | |
| Totals | 769 | 756 | 669 72 | 1,964 | 1,957 | 1,445 20 | 1,201 | 1,202 | 6 | 1 | | 796 98 | 21 50 |
| Less "Payouts to wireless | | | 349 35 | | | 650 14 | | | | | | | |
| Net revenue | | | 320 37 | | | 795 06 | | | | | | | |

J. T. PHELAN,

*Superintendent.*

VANCOUVER, B.C., June 23, 1915.

Halifax, N.S., March 31, 1915.

D. H. Keeley, Esq.,
General Superintendent Government Telegraphs,
Ottawa, Ont.

Dear Sir,—Herewith please find a summary of the work done and the lengths of cable handled by ss. *Tyrian*.

## REPORT No. 12, CABLE SHIP *TYRIAN*.

April 29.—Arrived at Gannet Rock.
May 2.—Laid 3·28 knots of cable between Three Islands and Little Wood island.
" 9.—Completed connection between Duck Island, Nantucket Island and Grand Manan, 2·25 knots.
" 14.—Laid shore end cable at Wood Harbour.
" 16.—Completed laying cable between Seal Island and Prospect Point, 15·38 knots.
" 18.—Completed connection between Cape Negro Island and Purgatory Point and between Half Moon and Blanche Islands respectively, 1·21 and 1·43 knots.
" 19.—Arrived at Halifax.
June 11.—Completed taking Prince Edward Island cable from ss. *Greenwich* and left Halifax for Northumberland Straits.
" 20.—Completed laying Caribou Wood island cable 12·5 knots.
July 4.—Completed laying cable Cape Traverse to Cape Tormentine, 8·82 knots.
" 16.—Completed repairs to Meat Cove—Old Harry cable.
" 17.—Completed repairs to Meat Cove—St. Pauls Island cable.
" 20.—Repaired Little Bras d'Or cable.
" 22.—Repaired Big Bras d'Or cable.
" 25.—Repaired Grosse Isle—Bryon Island cable.
" 31.—Completed repairs Long Point to Mingan—Anticosti cable.
Sept. 14.—Completed repairs to Saguenay river cable.
Oct. 5.—Completed repairs to Deer Island cable.
Feb. 9.—At Halifax receiving cable from ss. *Sagamore*.
Mar. 31.—At Halifax.

## LENGTH OF CABLE.

| Dates. | Deep-sea Cable on Hand. | Knots. | Knots. |
|---|---|---|---|
| | Cable on hand April 1, 1914 | | 34.38 |
| April 7 | Sent to Manitoulin | 3.00 | |
| " 9 | " Leamington, Ont | 1.50 | |
| " 14 | " Berthierville, Que | 0.73 | |
| May 2 | Laid Three Island—L. Wood Island | 3.28 | |
| " 8 | " Duck Island, Nantucket Island | 2.25 | |
| " 16 | " Seal Island, Prospect Point | 15.38 | |
| " 18 | " Purgatory-Cape, Negro Island | 1.21 | |
| " 18 | " Blanche, Half Moon Island | 1.43 | |
| July 10 | Picked up | | 0.38 |
| " 10 | " | | 4.40 |
| " 13 | " | | 0.53 |
| " 14 | " | | 0.81 |
| " 16 | Laid Magdalen Island Cable | 5.33 | |
| " 16 | Condemned | 0.13 | |
| " 17 | Laid St. Paul's Cable | 0.28 | |
| " 22 | " Big Bras d'Or Cable | 0.10 | |
| " 25 | " Byron Island Cable | 0.33 | |
| Aug. 3 | Picked up | | 0.38 |
| " 3 | " | | 0.03 |
| " 3 | " | | 0.06 |
| " 3 | " | | 0.54 |
| " 3 | " | | 0.11 |
| " 3 | " | | 0.60 |
| " 3 | " | | 0.29 |
| " 3 | Laid | 0.91 | |
| " 3 | " | 1.27 | |
| " 3 | " | 0.42 | |
| Aug. 6 | Sent to Levis, Que | 2.50 | |
| " 7 | Picked up phone cable | | 1.81 |
| Sept. 22 | " Tadousac repair | | 0.66 |
| " 22 | " | | 0.13 |
| " 22 | " | | 0.07 |
| " 23 | Laid Tadousac | 1.00 | |
| " 23 | Condemned | 0.20 | |
| Nov. 13 | Laid Eastport—Deer Island | 0.10 | |
| Dec. 4 | Sent to British Columbia | 1.50 | |
| 1915. | | | |
| Feb. 8 | Received from ss. *Sagamore*, being cable for shipment to North-west and British Columbia | | 23.00 |
| Mch. 31 | Cable on hand | | 25.33 |
| " 31 | " laid | 42.85 | |

## SHORE END CABLE.

| | | | |
|---|---|---|---|
| 1914. | | | |
| May 16 | On hand | | 2.14 |
| " 16 | Laid, Seal Island | 0.26 | |
| Mch. 31 | On hand | 1.88 | |
| | | 2.14 | 2.14 |

## TWO CORE CABLE.

| | | | |
|---|---|---|---|
| June 9 | Received from Greenwich | | 14.00 |
| " 19 | Laid Caribou-Wood Island | 12.50 | |
| | On hand | 1.50 | |
| | | 14.00 | 14.00 |

FOUR CORE CABLE.

| Date. | Deep-sea Cable on Hand. | Knots. | Knots. |
|---|---|---|---|
| June 11.... | Received from Greenwich..... | ..... | 10.00 |
| July 3.... | Laid Traverse-Tormentine..... | 8.82 | |
| | On hand..... | 1.18 | |
| | | 10 00 | 10.00 |

I have the honour to be sir,

Yours faithfully,

A. B. McDONALD,

*Electrician C. G. S. Tyrian.*

PART VI

# REPORT OF THE COLLECTOR OF REVENUE

## DEPARTMENT OF PUBLIC WORKS

1914-15

# REPORT OF THE COLLECTOR OF REVENUE.

Ottawa, July 8, 1915.

The Secretary,
Dept. of Public Works,
Ottawa.

Sir,—I have the honour of submitting my report for the twelve months ended March 31, 1915.

During the twelve months just closed, the revenue accrued from public works shows a falling-off of $31,998.03, being $238,641.31, while in the preceding year it was $270,639.34.

The collections show a decrease of $25,726.40, being $229,931.12, while in 1913-14 they amounted to $255,657.52.

The revenue accrued from slides and booms was $80,609.29, or $3,725.76 more than for year ended March 31, 1914.

The collections were $80,598.12, or $3,714.90 more than the previous year.

The outstanding uncollected revenue from slides and booms was increased by $11.17.

The graving docks yielded $35,304.56, or $26,283.25 less than in 1913-14.

Sales and rents collected amounted to $114,028.44, being $3,256.06 less than the preceding year.

Having dealt with the revenue in a general way, I now submit the particulars, in detail, relative to the several services under their respective heads.

## SLIDES AND BOOMS.

### OTTAWA DISTRICT.

The tolls charged up amounted to $35,344.81, or $10,764.43 more than in 1913-14.

The number of sawlogs that passed through the works was 4,154,855, or 165,572 pieces more than the previous year.

Of square timber there was none.

Of the revenue accrued during the year, all but $16.17 was collected.

Of the dues accrued since July 1, 1889, when this department took over the collection, there remains uncollected $9,161.61, full particulars of which will be found in statement No. 2 herewith.

Of the dues accrued before July 1, 1889, there still remains $56,805.65, all of which should be written off. See statements Nos. 1 and 3 for particulars.

The accounts for the Ottawa district stand thus:—

| | |
|---|---|
| Dues accrued during the year to March 31, 1915 | $35,344 81 |
| Outstanding, March 31, 1914 | 9,145 44 |
| | $44,490 25 |
| Collected | 35,328 64 |
| Balance outstanding March 31, 1915 | $9,161 61 |

| | | |
|---|---|---|
| Being composed of— | | |
| Dues of 1889-90 | $6,903 05 | |
| " 1890-91 | 28 42 | |
| " 1892-93 | 379 80 | |
| " 1896-97 | 196 71 | |
| " 1903-04 | 637 37 | |
| " 1911-12 | 723 63 | |
| " 1912-13 | 251 15 | |
| " 1913-14 | 25 31 | |
| " 1914-15 | 16 17 | |
| | $9,161 61 | |
| Balance of dues outstanding prior to July 1, 1889, when this Department took over the collection | | $56,805 65 |

Herewith are statements in detail.

No. 1.—Statement of amounts outstanding prior to July 1, 1889, uncollected March 31, 1915.

No. 2.—Statement of dues accrued at Ottawa since July 1, 1889, uncollected March 31, 1915.

No. 3.—Statement of dues accrued at Quebec prior to July 1, 1889, uncollected March 31, 1915.

No. 4.—Statement of the number of pieces of square timber, sawlogs, etc., which passed through the Ottawa works during the year ended March 31, 1915.

No. 5.—Statement of dues accrued from each of the slides and works of the Ottawa district during the year ended March 31, 1915.

Apart from the four accounts amounting to $1,044.70, all the revenue from the Ottawa slides and booms, since I took charge in 1889, has been collected, excepting such as should have been written off long ago, or a few items in dispute which I expect will have to be forgiven.

While the number of sawlogs which passed through the works during the past year was only 165,572 pieces more than the preceding season, the revenue was $10,764.43 more than in 1913-14. That the revenue should thus show an increase altogether out of proportion to the number of logs passing through the works is easily explained thus: During the year 1913-14, Mr. J. R. Booth held up all his logs made on the tributary streams from which the government tolls are principally derived, and these logs were brought out last summer; so that, while in 1913-14 the quantity of logs which passed through the works was slightly less than that of 1914-15, yet the works used were mostly those which yield the smaller rates of slidage.

The only work on the Ottawa river where the revenue was less in 1914-15 than in the previous year was the Hull slide, the difference being $834.42 in favour of the former year. The increase in 1914-15 was from the following works, namely: Cheneaux Boom, $278.42; River Petewawa, $3,375.20; Madawaska, $94.04; Coulonge, $79.36; Dumoine, $135.80; Black River, $6,163.19; Gatineau, $1,474.66. Summing up these increases, and from the total, deducting the decrease of $834.42 on the main Ottawa and $1.82 interest in 1913-14, there being no similar item last year, gives a net total increase of $10,764.43 as above stated. The season of 1913 was one of the worst on record for lumbering operations on the Ottawa river and its tributaries. It was still more unfavourable in the summer of 1914, so much so that more than once some of the large concerns had almost decided on closing their mills, the supply of logs being quite inadequate to keep them in operation. As a matter of fact, late in the summer some of them were obliged to shut down altogether, not so much on account of a shortage of logs but because the river was so low that the power necessary to operate the mill was not available. Hence, although my expectations as to the revenue reaching normal figures were to a certain extent fulfilled, the result was much smaller than I anticipated when making my report a year ago.

Up to this date, although the river Ottawa has not at any time reached ordinary spring level, yet driving conditions have been reasonably favourable. On one stream

a single firm has succeeded in driving out their logs which were the accumulation of almost all of four seasons' cut.

As the seasons have changed and the supply of water has been so erratic, it has been very difficult to anticipate what the revenue will be for the current year, any more than that if present conditions continue, there should be a considerable increase over the revenue accrued during the season 1914-15.

ST. MAURICE DISTRICT.

The revenue accrued from this district was $43,283.78, being $6,725.88 less than in 1913-14.

The collections amounted to $43,288.78, or $6,740.88 less than 1913-14.

With the exception of an item of $3,709.62, dues of 1909-10 disputed, all the dues accrued in this district since I took it in 1892 have been collected.

The amount outstanding prior to July 1, 1892, remains unchanged, viz., $14,481.49, and should be written off for reasons assigned in statement No. 6 herewith.

The number of pieces of all kinds of timber that passed through the works was equivalent to 5,745,291 pulp and sawlogs or 14,992 pieces less than the previous year.

The difference between the number of sawlogs which passed through the works compared with the previous year, namely, 14,992 pieces, is so much out of proportion to the shortage in the revenue, which was $6,725.88 less than in 1913-14, that explanation is necessary. In the latter year, the number of logs which used all the works on the St. Maurice was 2,462,059 pieces, but in 1914-15, there were only 1,713,083 pieces, on the other hand there were 2,687,180 logs stopped at Grand Mere last year, while the year before there were only 1,977,904 stopped, and at Shawinigan falls there were 24,708 logs more last year than in 1913-14.

Hence, it will be seen that although the total number of logs was but slightly smaller in 1914-15, the disproportion in the amount of revenue less than the previous year arose from the fact that the number of logs which used all the works was 748,976 pieces less than in 1913-14.

In this district, circumstances were even more unfavourable to the lumbermen than they were in the Ottawa district.

Early in the summer, the water was so scanty that sorting at La Tuque was discontinued, there being not sufficient water in this channel to float the logs which passed through the sorting gaps. After a month or so, sorting was resumed, but it was after the main drive had left. Hence, unusual quantities of logs were left on the main stream last autumn. Apart from this, we had large cuts left on the smaller streams, where they had been laid during the winter. This year, notwithstanding the scanty fall of snow last winter, the smaller streams in this district were at a fair driving pitch in the spring, and I am informed that all these drives from the smaller streams, excepting a few which were purposely held up, have come into the main River St. Maurice. Consequently, there should be an unusually large quantity of logs brought to the mills this season, of which in the vicinity of eight million pieces will pass through the government works.

The St. Maurice River Boom and Driving Company are accomplishing a great work in handling the output of this district, the whole being handled from La Tuque to Three Rivers under one management. There is less expense, and superior results obtained when compared with the old system of individual driving.

There is, however, one drawback to quick driving, there being the necessity for three separate sortings before the logs for Three Rivers reach their destination. This is, however, unavoidable, and only requires the good-will and hearty co-operation of the firms at La Tuque, Grand 'Mere, and Shawinigan falls to reduce the delay to a minimum.

It is easy to formulate a plan and lay down rules for regulating any line of trade, but circumstances are sometimes such as to completely dislocate the best and apparently most feasible designs. This has occurred this year; but also the quantities

of logs which were supposed to be passed at the three points mentioned is much below that desired, in order to ensure the main drive being finished at a fixed date this fall so that all the logs which arrive there may be cut up before the end of the season. Unless past experience leads me to err, I doubt very much at the rate the logs are being handled by the up-river companies, that many of the logs which arrive at Three Rivers will be left in the booms this winter.

I have to note with regret that the Grès Falls Company met with serious misfortune. Their saw-mill, one of the largest in Three Rivers, was burnt in the month of May, 1915.

They have lost no time in building but, despite their most strenuous efforts, it cannot be but late in the season before they will be in a position to turn out their daily average of last year. Consequently, they have intentionally hung up a large quantity of logs where they will be safe, and should come early next year.

On the whole, I expect this to be a record year, the number of logs brought down being the largest ever known, and consequently the revenue should show a very substantial increase over last year.

NEWCASTLE DISTRICT.

The dues accrued from this district amounted to $846.48, being $834.48 more than the previous year, all collected at this date.

The tolls outstanding on March 31, 1915, amounting to $3,556.89, of which $3,521.19 should be written off in accordance with a judgment in the Exchequer Court, $35.70 will also have to be forgiven, the debtor being hopelessly insolvent at the time of his decease.

Full particulars of amount outstanding will be found in statement No. 7 herewith.

The works at Burleigh falls having been rebuilt, there was no difficulty in passing the logs there last summer. In fact, for the first time, I had not a single complaint from the lumbermen, this being, in part, due to a slight change in the shape of a pier at the head of the fall, which has the effect of causing the logs to be carried out more towards the middle of the channel; thus they are carried by a corner where jams used to form and cause considerable expense to break and release.

I regret to say that the Cavendish Lumber Company, whose mill was at Lakefield, Ont., have gone out of business there completely, and I believe it is the intention of the parties from whom they rented the saw-mill to dismantle it.

The Cavandish Lumber Company was the largest contributor to the revenue of this district. Hence, the amount derived therefrom appears small compared with years previous to 1913-14. Consequently, I do not anticipate that we will have more than $1,000 a year from this source in future.

When the Department of Railways and Canals reconstructed the dam at Fenelon falls, the upper portion of the timber slide was removed, and as the amount of timber that will come by this point is now so insignificant, it was considered inadvisable to spend any more money there for lumbering purposes. We will therefore derive no more revenue at this point.

SAGUENAY DISTRICT.

The dues accrued during the year ended March 31 last, amounted to $1,134.22, all paid, being $1,147.27 less than in 1913-14.

The shortage in this district can only be explained by the fact that the largest company obtaining logs through the Saguenay boom now brings a large proportion of them to the mill over the Ha Ha Bay and Saguenay railway, instead of driving them down the Saguenay river. There is only one concern now using the government boom, and they dispose of all their logs under 8 inches in diameter to the Chicoutimi Pulp Company, who thus get by far the greatest proportion of the logs which pass through our works.

## GRAVING DOCKS.

### ESQUIMALT GRAVING DOCK.

The revenue from this service was $13,995.90, being $7,257.34 more than the previous year. (See statement No. 8).

Of the 109 days the dock was occupied during the year, it was used for sixty-one days by H. M. and C. G. vessels. The total number of vessels docked was twenty-seven of 65,183 tons.

I visited this dock in July, 1914, and made a careful examination of the books and accounts, which I found to be well kept and perfectly in accordance with the returns made monthly to the department for the previous four years.

While at Esquimalt, I met some of the principal people who repair ships in this dock, and had a favourable opportunity of seeing how much more attractive to business it would be if it was found practicable to install a compressed-air plant and a travelling crane on the dock.

Under existing conditions, when a compressed air plant is needed, it has to be conveyed from the shipyard to the dock and returned when the work is finished. This entails an expense of over $200 to a ship, so that it becomes quite a factor when deciding where to take a vessel for repairs.

I take the liberty of suggestitng that this might be supplied, because I am convinced that the interest on cost and the expense of their up-keep would be met by imposing a reasonable charge for their use in addition to the ordinary dock dues, which would be cheerfully paid by shipowners.

The regulations were carefully scrutinized by the dockmaster and myself, and several important amendments were made by Order-in-Council of March 31, 1915.

### LÉVIS GRAVING DOCK.

The revenue was $9,026.01 less than for the year 1913-14, being $21,308.66. (See statement No. 9.)

During the season of navigation, the dock was occupied for 302 days by fifteen vessels of 28,826 tons, the dock being so occupied for 178 days.

During the winter of 1914-15, it was occupied by dredges *Fruling, Galveston,* and *Progress, SS. Alice* and tug *Storm King.*

### KINGSTON GRAVING DOCK.

On May 1, 1910, the Kingston Shipbuilding Company took possession of the dock under lease, the rental of which, $10,000 per annum, was payable at the end of each year. But the business which they had established, it is claimed, did not meet anticipation, resulting instead in a serious loss, and they are endeavouring to obtain a substantial reduction of the rental. Pending a decision, the department has received nothing from them during the past year.

### RENTS.

With regard to the collection of rentals under leases granted by this department, which was formerly done by the Inland Revenue Department:—

Statement Nos. 10 and 11 show in detail the condition on March 31, 1915, of the accounts taken over on March 31, 1909, from the Inland Revenue Department.

Statement No. 12 shows the condition of land sales and interest account, also from the Inland Revenue Department, which shows no change for many years.

Several of the unsettled accounts are of many years' standing, some are under investigation, and others, I expect, will have to be written off, for good and sufficient reasons.

Exclusive of the above-mentioned rentals, the revenue accrued from government properties has been in 1914-15, including sales and interest, $119,203.46, or $9,440.54 less than in 1913-14.

Of this sum, $109,740.44 was collected; $7,165.77 written off for commission and expenses, in lieu of repairs, or on account of poverty,—and $21,614.05 was outstanding at the close of the year.

The greater portion of the increase in this account was due to the rentals from property on Wellington street, and streets adjoining, expropriated or purchased for new building sites, and Toronto post office site.

A considerable part of the amount uncollected is retained by tenants, pending settlement of their claims for compensation under leases, and for other reasons. I expect that, with the exception of a few small accounts, the most of this indebtedness will be cleared off this year as to these properties.

The amount outstanding may appear large but it must be borne in mind that included therein are Sussex street rents, carried over from last year, and $1,333.34 due on a sale in Westminster, B.C., reduced to $1,000, and $1,500 not yet payable on a sale of property in Gananoque, Ont.

In the case of the Sussex street rents, most of the buildings, since demolished, were old and in very bad condition, only the poorer class of people would rent them, and when these, as in many instances, were overtaken by sickness and other misfortunes, we could not put them on the street, and they could not pay. Hence, the source of this deficit, which will have to be written off in many cases.

The Wellington street properties are being well looked after by four agents, and I do not anticipate much loss in the rentals from this source.

The large increase in this account has been a serious load in this office, nevertheless, I am glad to say that it has been kept well up to date.

Statement of rents collected from public properties, during the year ended March 31, 1915, viz.:—

| | |
|---|---|
| Hydraulic and other rents | $ 4,288 00 |
| Sussex street block, Ottawa | 1,949 30 |
| Egan block, Wellington (south), Ottawa | 5,933 32 |
| Wellington street (north), Ottawa | 62,456 37 |
| Province Saskatchewan | 1,764 00 |
| Province Manitoba | 441 00 |
| Sundry places | 2,793 50 |
| Public building sites | 4,542 24 |
| Rents, old post office building, Victoria, B.C. | 7,894 45 |
| Toronto post office site | 19,036 26 |
| Sales and interest | 2,930 00 |
| | $114,028 44 |

COMPARATIVE TABLE of Public Works Revenue accrued during the year ended March 31, 1915, compared with that of the Fiscal Year ended March 31, 1914, and amounts of Collections on Account of same.

| — | Year ended March 31, 1915. | Year ended March 31, 1914. | Increase, 1915. | Decrease, 1915. |
|---|---|---|---|---|
| *Slides and Booms.* | $ cts. | $ cts. | $ cts. | $ cts. |
| Ottawa district | 35,344 81 | 24,580 38 | 10,764 43 | |
| St. Maurice district | 43,283 78 | 50,009 66 | | 6,725 88 |
| Newcastle district | 846 48 | 12 00 | 834 48 | |
| Saguenay district | 1,134 22 | 2,281 49 | | 1,147 27 |
| | 80,609 29 | 76,883 53 | 11,598 91 | 7,873 15 |
| Increase, 1915, $3,725.76. | | | | |
| *Graving Docks.* | | | | |
| Esquimalt, B.C. | 13,995 80 | 21,253 24 | | 7,257 34 |
| Kingston, Ont | | 10,000 00 | | 10,000 00 |
| Levis, Que | 21,308 66 | 30,334 67 | | 9,026 01 |
| | 35,304 56 | 61,587 91 | | 26,283 25 |
| Decrease, 1915, $26,283.35. | | | | |
| *Rents and Sales.* | | | | |
| Hydraulic rents | 3,498 00 | 3,498 00 | | |
| Minor public works | 26 00 | 26 00 | | |
| Other public properties | 119,203 46 | 128,643 90 | | 9,440 54 |
| | 122,727 46 | 132,167 90 | | 9,440 54 |
| Decrease, 1915, $9,440.44. | | | | |
| *Accrued.* | | | | |
| Slide and Boom dues | 80,609 29 | 76,883 53 | 3,725 76 | |
| Graving docks | 35,304 56 | 61,587 91 | | 26,283 35 |
| Rents and sales | 122,727 46 | 132,167 90 | | 9,440 44 |
| | 238,641 31 | 270,639 34 | 3,725 76 | 35,723 79 |
| Decrease, 1915, $31,998.03. | | | | |
| *Collected.* | | | | |
| Slide and Boom dues. | 80,598 12 | 76,883 22 | 3,714 90 | |
| Graving docks | 35,304 56 | 61,489 80 | | 26,185 24 |
| Rents and sales | 114,028 44 | 117,284 50 | | 3,256 06 |
| | 229,931 12 | 255,657 52 | 3,714 90 | 29,441 30 |
| Decrease, 1915, $25,726.40. | | | | |

EDW. T. SMITH,

*Collector of Public Works Revenue.*

No. 1—STATEMENT of Slidage and Boomage from the Ottawa Slides and Works, accrued prior to July 1, 1889, outstanding March 31, 1915.

| By Whom Due. | Bad and Doubtful Debts. | Chaudière Boomage in Suspense. | Other Slide and Boom Dues Disputed. | Total Outstanding on Sept. 30, 1902. | Year to which Dues belong. | Remarks. |
|---|---|---|---|---|---|---|
| | $ cts. | $ cts. | $ cts. | $ cts. | | |
| John and Wm. McLean | 53 14 | | | 53 14 | 1873 | Insolvent. |
| John Rowan | 342 50 | | | 342 50 | 1872-1873 | " |
| Lemieux and Charette | 21 30 | | | 21 30 | 1873 | " |
| Taillon and Lapierre | 148 10 | | | 148 10 | 1873-1874 | " |
| Mosgrove and McHarry | 261 42 | | | 261 42 | 1873-1874 | " |
| W. C. Wells | 600 90 | | | 600 90 | 1873-1874 | " |
| Dufresne and McGarity | 528 80 | | | 528 80 | 1874-1875 | " |
| Walton Smith | 171 46 | | | 171 46 | 1874-1875 | " |
| A. H. Baldwin | 3,507 92 | | | 3,507 92 | 1871 to 1874 | " |
| Hon. James Skead | 9,807 65 | | | 9,807 65 | 1861, 1863, 1864, 1869, 1875 to 1878. | " |
| Batson and Currier | 5,558 70 | | | 5,558 70 | 1875 to 1877 | " |
| A. F. A. Knight | 546 30 | | | 546 30 | 1878 | " |
| James Walker | 11 25 | | | 11 25 | 1877 | " |
| R. Campbell & Son | 1,558 50 | | | 1,558 50 | 1879 to 1881 | " |
| James G. Bryson | 73 50 | | | 73 50 | 1886 | " |
| Costello Bros | 90 62 | | | 90 62 | 1882 | " |
| N. E. Cormier | 428 34 | | | 428 34 | 1883 | " |
| James Yuhill | 9 29 | | | 9 29 | 1876 | Overcharge. |
| J. and B. Grier | 76 84 | | | 76 84 | 1883 | " |
| R. and W. Conroy | 95 42 | | | 95 42 | 1882-1883 | " reported in return S—38, for March, 1886. |
| A. P. White | 101 00 | | | 101 00 | 1881 | " |
| B. Caldwell & Son | 4 33 | | | 4 33 | 1887 | " |
| J. R. Booth | | 9,871 92 | 398 88 | 10,270 81 | 1881 to 1888 | $398.88, counter claim for damages by the breaking of Coulonge boom. |
| Perley and Pattee | | 8,889 85 | | 8,889 85 | 1881 to 1888 | |
| The Bronson and Weston Lumber Co. | | 8,180 79 | | 8,180 79 | 1881 to 1888 | |
| Pierce & Co. | | 462 18 | | 462 18 | 1888 | |
| G. A. Grier & Co. | | 1,060 59 | | 1,060 59 | 1886-1887 | *Chaudière boomage These parties claim that they have maintained these works wholly at their own expense since 1881. |
| Estate late Levi Young | | 1,461 20 | | 1,466 20 | 1881 to 1885 | |
| Wm. Mason | | 413 85 | | 413 85 | 1881 to 1888 | |
| Gilmour & Co. | | 406 27 | | 406 27 | 1884 | |
| John Rochester | | 258 88 | | 258 88 | 1881 to 1883 | |
| J. and G. Bryson | | | 252 20 | 252 20 | 1886 | Counter claim for damages by the breaking of Coulonge works. |
| | 23,997 28 | 31,006 54 | 651 08 | 55,653 90 | | |

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

EWD. T. SMITH,
*Collector of Slide and Boom Dues.*

No. 2.—STATEMENT of Slide and Boom Dues accrued from the Ottawa River Works, since July 1, 1889, outstanding March 31, 1915.

| Name. | Year to which dues belong. | Chaudiere Boomage in Suspense. | Ordinary Dues. | Totals. | Remarks. |
|---|---|---|---|---|---|
| | | $ cts. | $ cts. | $ cts. | |
| J. R. Booth | 1889-90 | 2,561 69 | ..... | 2,561 69 | |
| The Bronson & Weston Lumber Co. | 1889-90 | 2,056 96 | ..... | 2,056 96 | Chaudiere boomage reported to Council and referred to Treasury Board. |
| Perley & Patee | 1889-90 | 1,203 26 | ..... | 1,203 26 | |
| Wm. Mason & Sons | 1889-90 | 167 66 | ..... | 167 66 | |
| Pierce & Co. | 1889-90 | 913 48 | ..... | 913 48 | Should be written off. |
| Alex. Fraser, Acct. Thos. Stephens. | 1890-91 | ..... | 28 42 | 28 42 | Legal action taken to recover this. |
| J. R. Booth | 1892-93 | ..... | 379 80 | 379 80 | Retained by Mr Booth in settlement of account due him, which the Auditor General refused to pay as Mr. Booth appeared to be in arrears in this and statement No. 1. |
| Bryson & Fraser | 1896 | ..... | 196 71 | 196 71 | Have counter claim for work done on slide to this amount. |
| J. R. Booth | 1903 | ..... | 339 27 | 339 27 | Petawawa slidage disputed. |
| Hawkesbury Lumber Co. | 1903 | ..... | 298 10 | 298 10 | " " " |
| Pembroke Lumber Co. | 1911-2-3 | ..... | 1,016 26 | 1,016 26 | Counter claim for building dam. |
| | | 6,903 05 | 2,258 56 | 9,161 61 | |

EDW. T. SMITH,
*Collector of Slide and Boom Dues.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

No. 3.—STATEMENT of outstanding Slide Dues, Ottawa district, bonds for which were sent to Quebec for collection.

| Name. | From 1860. | From 1861. | Total. |
|---|---|---|---|
| | $ cts. | $ cts. | $ cts. |
| Hon. James Skead | 245.00 | 210.00 | 455.00 |
| James Mair | ..... | 696.75 | 696.75 |
| | 245.00 | 906.75 | 1,151.75 |

These amounts were uncollected, as the parties claimed damages for loss caused by the Madawaska boom breaking in 1860.

A decision on their claims was not arrived at till August 2, 1869. On the 5th idem, Messrs. Skead and Mair were notified that the department could not recognize their claim.

To the best of my knowledge, this decision was never communicated to the Collector of Slide Dues; consequently, these amounts remained in abeyance.

Since then, both parties died, and I believe both were insolvent at the time of their death.

EDW. T. SMITH,
*Collector of Slide and Boom Dues.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

STATEMENT of the number of pieces of Square Timber, Saw-logs, etc., that passed through the Government Slides and Works on the Ottawa River and its Tributaries during the Fiscal Year ended March 31, 1915.

| | Pieces. |
|---|---|
| Square timber | None. |
| Sawlogs | 4,154,855 |
| Boom and dimension timber | 47,146 |
| Railroad ties | 50,286 |
| Fence posts | 25,466 |
| Telephone poles | 1,405 |
| | 4,279 158 |

Also 73·464¾ cords pulpwood.

The revenue accrued on the above was $35,344.81.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

EDW. T. SMITH,
*Collector of Public Works Revenue.*

No. 5.—STATEMENT showing the Dues accrued on the undermentioned works on the Ottawa River and its tributaries during the Fiscal Year ended March 31, 1915.

| River or Other Improvement. | Amount. |
|---|---|
| Main Ottawa | $1,293 65 |
| Cheneaux boom | 4,188 88 |
| River Petewawa | 9,325 04 |
| River Madawaska | 155 33 |
| Coulonge | 4,392 11 |
| Dumoine | 284 00 |
| Black River | 8,706 10 |
| Gatineau | 6,999 70 |
| | $35,344 81 |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

No. 6.—STATEMENT of Slide and Boom Dues from the St. Maurice slides and works outstanding on March 31, 1915.

| Name. | Year to which dues belong | Amount. | Total. | Remarks. |
|---|---|---|---|---|
| | | $ cts. | $ cts. | |
| George Baptist, Son & Co. | 1878 | 469 95 | | |
| " | 1879 | 3,110 62 | | |
| " | 1880 | 1,696 18 | | |
| " | 1881 | 293 69 | | |
| " | 1882 | 165 80 | | Have counter claims for damages to logs caused by the booms not being stretched early enough in the spring of 1878 to prevent the logs going over the chute. |
| " | 1884 | 118 50 | | |
| " | 1888 | 4 28 | | |
| | | | 4,859 02 | |
| Ross, Ritchie & Co | 1878 | 3,072 84 | | The claims were submitted to Special Commissioner, Mr. McDougall, afterwards Judge, who, after hearing the evidence on both sides, recommended that the claims of the parties should be allowed. |
| " | 1883 | 2,173 68 | | |
| " | 1884 | 38 96 | | |
| " | 1886 | 1 62 | | |
| " | 1887 | 4 38 | | |
| | | | 5,281 48 | |
| Alex. Baptist | 1879 | | 2,116 96 | |
| Wm. Ritchie & Co | 1888 | 779 24 | | |
| " | 1889 | 332 11 | | |
| | | | 1,111 35 | Of this amount $754.20 is claimed to be an overcharge. Insolvent. |
| Ritchie Bros | 1886 | 413 43 | | |
| " | 1887 | 634 71 | | |
| | | | 1,048 14 | This amount is composed of overcharges in 1886 and 1887 of $442.76 and overpayment in 1884 of $205.38. |
| G. B. Hall | 1890 | | 49 34 | Insolvent. |
| T. E. Normand | 1890 | | 42 28 | Claims that this balance is an overcharge. |
| Treffle Biron | 1891 | | 0 92 | Would cost more to collect than it is worth. |
| | | | *14,481 49 | |
| Laurentide Paper Co | 1909 | 3,709 62 | 3,709 62 | |
| | | | 18,191 11 | |

* To make this balance agree with the Public Accounts, there should be deducted $7.93 over credited Alex. Baptist, and $217.17 added thereto, being $190.40 paid July 23, 1884, and $26.77 overcharged in error to Wm. Little, not in any of the collector's returns, which will give balance due September 30, 1894, of $14,690.73.

EDW. T. SMITH,
*Collector of Public Works Revenue.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

No. 7.—STATEMENT of Slides and Boom Dues accrued from the Newcastle and Trent River works, remaining uncollected March 31, 1915.

| Name. | Year to which dues belong. | Amounts disputed. | Ordinary dues. | Total. | Remarks. |
|---|---|---|---|---|---|
| | | $ cts. | $ cts. | $ cts. | |
| Irwin & Boyd | 1881 | 59 79 | | 59 79 | |
| Thomson & McArthur | 1880 | 52 78 | | 52 78 | |
| Jabez Thurston | 1882 | 12 50 | | 12 50 | Insolvent. |
| McDougall & Ludgate | 1879 | 65 07 | | 65 07 | |
| Bigelow & Trounce | 1882 to 1885 | 216 21 | | 216 21 | |
| R. G. Strickland | 1882, '83, '85, '86, and '87 | 215 08 | | 215 08 | |
| Est. late Geo. Hillard | 1877 to 1883 and 1889 | 354 15 | | 354 15 | Dead and estate distributed. |
| T. G. Hazlett | 1881, '82, '84, and 1889 | 885 25 | | 885 25 | |
| J. M. Irwin | 1882, '83, '85 and '88 | 698 45 | | 698 45 | |
| D. Ullyot | 1881 to 1887 | 547 68 | | 547 68 | According to judgment in Exchequer Court, *re* Boyd *vs.* |
| Green & Ellis | 1881 to '83, '85, '88, and '89 | 157 01 | | 157 01 | |
| A. W. Parkin | 1884, '85, '88, '90 and '91 | 65 92 | | 65 92 | |
| The Dickson Estate | 1883 | 137 50 | | 137 50 | Smith, these cannot be collected. |
| Alfred McDonald | 1888 | 40 80 | | 40 80 | |
| John Parkin | 1889 | 13 00 | | 13 00 | |
| John Dovey | 1894, '95 '96 | | 35 70 | 35 70 | Dead, insolvent. |
| | | 3,521 19 | 35 70 | 3,556 89 | |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

No. 8.—The Dry Dock at Esquimalt, B.C.—Statement of Dues and other charges collected during the year ending March 31, 1915.

| Name of Vessel Docked. | Tonnage. | Period of Dockage. | | Dockage Charges. | Other Charges. | Total. |
|---|---|---|---|---|---|---|
| | | From | To | | | |
| | | | | $ cts. | $ cts. | $ cts. |
| Cruiser Galiano | 393 | Mar. 10 | Mar. 12 | 400 00 | 3 00 | 403 00 |
| D.G.S. Newington | 193 | " 30 | Apr. 3 | 450 00 | | 450 00 |
| " Lilloet and Naden | 705 | Apr. 3 | " 9 | 550 00 | 4 20 | 554 20 |
| SS. Arna | 5,204 | " 10 | " 11 | 263 20 | 4 80 | 268 00 |
| " Princess Charlotte | 3,844 | May 7 | May 12 | 868 00 | 31 80 | 899 80 |
| Cruiser Malaspina | 392 | " 14 | " 21 | 600 60 | 35 40 | 635 40 |
| SS. Princess Sophia | 2,320 | " 29 | " 30 | 200 00 | | 200 00 |
| " Maizatlan | 1,783 | June 8 | June 11 | 378 30 | 4 80 | 383 10 |
| " De Sable | 6,047 | " 11 | " 12 | 502 35 | 7 20 | 509 55 |
| St. Imberhorn | 2,042 | " 26 | " 27 | 302 10 | 4 20 | 306 30 |
| SS. Maria | 3,649 | " 29 | " 30 | 382 45 | 2 40 | 384 85 |
| Militia Dept | | Water supplied. | | | 4 20 | 4 20 |
| SS. Nevadan | 4,409 | July 13 | July 21 | 1,174 00 | 66 60 | 1,240 60 |
| H.M.S. Rainbow | 1,911 | " 24 | " 27 | 391 10 | 22 20 | 413 30 |
| Bkt. Kohala | 891 | Aug. 1 | Aug. 3 | 344 55 | 1 20 | 345 75 |
| H.M.S. Newcastle | 4,800 | " 31 | Sept. 2 | 230 65 | | 230 65 |
| Submarine C.C. 2 | | Sept. 4 | " 14 | 800 00 | 93 50 | 893 50 |
| SS. Prince George | 3,372 | " 15 | " 28 | 1,588 00 | 243 00 | 1,831 00 |
| " Princess Charlotte | 3,844 | " 30 | Oct. 2 | 392 20 | 16 80 | 409 00 |
| Militia Dept | | Water and light supplied. | | | 40 65 | 40 65 |
| Submarine C.C. 1 | | Oct. 18 | Oct. 22 | 600 00 | | 600 00 |
| Cruiser Malaspina | 392 | Jan. 5 | Jan. 11 | 254 20 | | 254 20 |
| Bk. Wulff | 1,580 | " 13 | " 14 | 279 00 | | 279 00 |
| SS. Str thdee | 4,409 | " 18 | " 19 | 420 45 | | 420 45 |
| H.M.S. Newcastle | 4,800 | Mar. 4 | Mar. 17 | 877 55 | | 877 55 |
| SS. Boyne | 4,431 | " 22 | " 24 | 451 55 | | 451 55 |
| " Prince Rupert | 3,379 | " 30 | " 31 | 368 95 | 2 40 | 371 35 |
| Cruiser Malaspina, Galiano and SS. Dunraven | 393 | | | | | 340 15 |
| | 65,183 | | | | | 13,995 90 |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

Department of Public Works,
Ottawa, July 8, 1915.

No. 9.—THE DRY DOCK AT LÉVIS, QUE.—Statement of Dues and other charges collected during the year ending March 31, 1915.

| Name of Vessel Docked. | Tonnage. | Period of Dockage. From | Period of Dockage. To | Dockage Charges. | Other Charges. | Total. |
|---|---|---|---|---|---|---|
| | | | | $ cts. | $ cts. | $ cts. |
| SS. Canada | | Wintering. | | 400 00 | | 400 00 |
| Dredge Fruhling | | Entry fee. | | 200 00 | | 200 00 |
| SS. Batiscan | | " | | 200 00 | | 200 00 |
| C.G.S. Lady Evelyn | | Wintering | | 400 00 | 3 00 | 403 00 |
| | | 1914. | 1914. | | | |
| SS. Batiscan | 4,836 | May 19. | June 8. | 2,107 36 | 19 40 | 2,126 76 |
| Lightship White Island | | Wintering. | | 400 00 | 2 00 | 402 00 |
| " Red Island | | " | | 400 00 | 3 00 | 403 00 |
| " Prince Shoal | | " | | 400 00 | 2 00 | 402 00 |
| Hopper Barge No. 1 | | " | | 400 00 | | 400 00 |
| SS. Storstad | | Entry fee. | | 200 00 | | 200 00 |
| | | 1914. | 1914. | | | |
| C.G.S. Cartier | 632 | Apr. 24 | May 7 | 250 00 | 36 63 | 286 63 |
| " Montcalm | 1,432 | " 24 | " 7 | 994 40 | 16 00 | 1,010 40 |
| Dredge Galveston | 1,332 | May 8 | " 19 | 889 46 | 12 00 | 901 46 |
| SS. Storstad | 6,028 | July 11 | Aug. 15 | 5,146 24 | 49 20 | 5,195 44 |
| Tug Gopher | 198 | Aug. 26 | " 30 | 150 00 | 50 00 | 200 00 |
| St. Barge India | | Entry fee. | | 200 00 | | 200 00 |
| D.G.S. Aranmore | 1,170 | June 22 | July 10 | 1,139 75 | 3 75 | 1,143 50 |
| St. Barge India | 976 | Aug. 31 | Sept. 3 | | 54 38 | 54 38 |
| SS. Monkshaven | 3,357 | Sept. 5 | " 19 | 1,805 68 | 20 00 | 1,825 68 |
| SS. Floriston | | Entry fee. | | 200 00 | | 200 00 |
| C.G.S. Montmagny | 1,269 | Aug. 18 | Aug. 21 | 190 35 | 50 00 | 240 35 |
| SS. Floriston | 3,429 | Sept. 21 | Oct. 5 | 1,744 38 | 15 25 | 1,759 63 |
| J. A. Ross (lamps) | | | | | 1 80 | 1 80 |
| C.G.S. Champlain | 522 | Oct. 31 | Nov. 18 | 1,000 00 | 5 00 | 1,005 00 |
| Cruiser Margaret | 755 | " 12 | Oct. 15 | 250 00 | | 250 00 |
| C.G.S. Druid | 503 | " 23 | " 28 | 500 00 | 4 00 | 504 00 |
| " Earl Grey | 2,357 | June 7 | June 19 | 1,274 26 | 10 30 | 1,284 56 |
| New Lauzon Dry Dock | | | | | 109 07 | 109 07 |
| | 28,796 | | | 20,841 88 | 466 78 | 21,308 66 |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

## No. 10—Rents, etc., from minor Public Works.

| Balance due on March 1, 1914. | Rents accrued up to March 31, 1915. | Total. | Occupant. | Description of Property. | Date to which Account is made up. | Paid during the year. | Balance due on March 31, 1915. | Total. |
|---|---|---|---|---|---|---|---|---|
| $ cts. | $ cts. | $ cts | | | | $ cts. | $ cts. | |
| 2,600 62 | ..... | 2,600 62 | R. Murdy ..... | Dunnvil'e Bridge..... | ..... | ..... | 2,600 62 | 2,600 62 |
| 8,000 00 | ..... | 8,000 00 | Corp. of Galt and Dundas.... | Dundas and Waterloo Road..... | ..... | ..... | 8,000 00 | 8,000 00 |
| | 1 00 | 1 00 | North American Tel. Co..... | Government Telegraph Line between Bath and Amherst | ..... | 1 00 | ..... | 1 00 |
| | 25 00 | 25 00 | Grand Trunk Ry. Co..... | Wharton Docks..... | Jan.14, '15 | ..... | 25 00 | 25 00 |
| 43 75 | ..... | 43 75 | ..... ..... ..... | Part of Building Portland, N.B..... | ..... | ..... | 43 75 | 43 75 |
| 10,644 37 | 26 00 | 10,670 37 | | | | 1 00 | 10,669 37 | 10,670 37 |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

Department of Public Works
Ottawa, July 8, 1915.

No. 11.—Hydraulic and Other Rents, etc., Lessees'

| Balance due April 1, 1914. | Rents accrued up to March 31, 1915. | Total. | Location. | Occupant. |
|---|---|---|---|---|
| $ cts. | $ cts. | $ cts. | | |
| | 200 00 | 200 00 | Ottawa River | The Royal Trust Co. |
| | 100 00 | 100 00 | " | " |
| | 300 00 | 300 00 | " | " |
| | 100 00 | 100 00 | " | " |
| | 100 00 | 100 00 | " | " |
| | 300 00 | 300 00 | " | " |
| | 400 00 | 400 00 | " | " |
| | 300 00 | 300 00 | " | " |
| | 100 00 | 100 00 | " | Ottawa Electric Railway Company |
| | 600 00 | 600 00 | " | Ottawa Power Company |
| 800 00 | 200 00 | 1,000 00 | " | Royal Trust Company |
| | 208 00 | 208 00 | " | J. R. Booth |
| | 10 00 | 10 00 | " | Royal Trust Company |
| | 100 00 | 100 00 | " | " |
| | 96 60 | 96 60 | " | " |
| 136 00 | | 136 00 | " | Mary Conroy |
| 570 84 | | 570 84 | " | Royal Trust Company |
| | 25 00 | 25 00 | " | " |
| 200 00 | | 200 00 | " | Merchants Bank of Canada |
| 96 00 | | 96 00 | " | " |
| | 1 00 | 1 00 | " | Ottawa Electric Railway Company |
| 380 00 | | 380 00 | " | John Rankin |
| 5 00 | 5 00 | 10 00 | " | Ottawa Electric Railway Company |
| | 50 00 | 50 00 | " | Royal Trust Company |
| | 1 00 | 1 00 | " | Alfred Desjardin |
| | 100 00 | 100 00 | " | Royal Trust Company |
| | 10 00 | 10 00 | " | Ottawa Electric Company |
| | 1 00 | 1 00 | St. Lawrence | Quebec Harbor Commissioners |
| 275 00 | | 275 00 | " | Richelieu & Ontario Navigation Company |
| | 1 00 | 1 00 | Quebec | Corporation of Quebec |
| 1 00 | 1 00 | 2 00 | " | Narcisse Blais |
| | 1 00 | 1 00 | Rondeau Harbour | School Trustees |
| | 1 00 | 1 00 | Collingwood | Great Northern Transit Company |
| 10 00 | 1 00 | 11 00 | Ottawa | E. G. Laverdure |
| 1 00 | 1 00 | 2 00 | Three Rivers | Corporation of Three Rivers |
| | 100 00 | 100 00 | " | Union Bag and Paper Company |
| 165 00 | | 165 00 | British Columbia | A. Peel |
| 90 00 | | 90 00 | " | Johnathan Maury |
| | 12 50 | 12 50 | " | Lemon Gonnason Company |
| | 12 50 | 12 50 | " | John Taylor |
| | 25 00 | 25 00 | " | Joseph Spratt |
| | 5 00 | 5 00 | " | Geo. A. Huff |
| 70 00 | | 70 00 | River du Lievre | Dominion Phosphate Company |
| 1 00 | | 1 00 | Charlottetown | Rt. Rev. Bishop McIntyre |
| | 16 00 | 16 00 | Antigonish, N.S | Burnham Morrill Company |
| 1 00 | 1 00 | 2 00 | Owen Sound | Grand Trunk Railway |
| 240 00 | | 240 00 | Windsor | Archie McNee |
| 25 00 | 5 00 | 30 00 | Bayfield, N.S | Chas. L. Bass |
| 1 00 | 1 00 | 2 00 | " | " |
| | 5 00 | 5 00 | Village of Brook | Wm. Pedwell |
| 1 00 | 1 00 | 2 00 | Walkerton | D. Robertson and J. Rowland |
| | 1 00 | 1 00 | Levis, P.Q. | Cyrille Robitaille |
| $3,068 84 | $3,498 00 | $6,566 84 | | |

Department of Public Works,
Ottawa, July 8, 1915.

SESSIONAL PAPER No. 19

Accounts for the Year Ended March 31, 1915.

| Description of Property. | Date to which Account is made up. | Paid during the Year. | Balance due on March 31, 1915. | Total. |
|---|---|---|---|---|
| | | $ cts. | $ cts. | $ cts. |
| Lot B. and C, Chaudière St. Service Ground | Dec. 31, 1914 | 200 00 | | 200 00 |
| Lot D | " 31, 1914 | 100 00 | | 100 00 |
| Lots H, I and J, Grist Mill North Head | " 31, 1914 | 300 00 | | 300 00 |
| Lot K, Fanning Mill, South Head St | " 31, 1914 | 100 00 | | 100 00 |
| Lot L, Service Ground | " 31, 1914 | 100 00 | | 100 00 |
| Lot Q, R and T, Service Ground, North Middle St | " 31, 1914 | 300 00 | | 300 00 |
| Lots M, N, O and P, (No water) | " 31, 1914 | 400 00 | | 400 00 |
| Lots E, F and G, South Head St | " 31, 1914 | 300 00 | | 300 00 |
| Lot S, Service Ground | " 31, 1914 | 100 00 | | 100 00 |
| Lots U, V, W, X, Y and Z, Service Ground | " 31, 1914 | 600 00 | | 600 00 |
| Two strips of land | " 31, 1914 | 1,000 00 | | 1,000 00 |
| Part of Government reserve, head of slide | Sept. 20, 1915 | 208 00 | | 208 00 |
| Bridge over slide | June 30, 1915 | 10 00 | | 10 00 |
| Strip of land, Amelia Island | Dec. 31, 1915 | 100 00 | | 100 00 |
| Reserve head of Chaudiere Island | Jan. 1, 1916 | 96 00 | | 96 00 |
| Small island in Dechenes Rapids | " 1, 1912 | | 136 00 | 136 00 |
| Portion of Lot 39, Concession A, Nepean | " 31, 1884 | | 570 84 | 570 84 |
| Excavated channel, slide and 2 dams, Chaudiere | March 1, 1916 | 25 00 | | 25 00 |
| Water lot opposite Lot 30, Condession A, Nepean | | | 200 00 | 200 00 |
| Three small islands, Ottawa River | | | 96 00 | 96 00 |
| Covering over portion of Ottawa Slides | Nov. 10, 1915 | 1 00 | | 1 00 |
| East Portion Hawley Island | June 20, 1891 | | 380 00 | 380 00 |
| Piece of land, Victoria Island | March 11, 1915 | 10 00 | | 10 00 |
| Land south side Middle St., Victoria Island | August 31, 1915 | 50 00 | | 50 00 |
| Land Longue Point Rouge, Templeton Co | Oct. 4, 1915 | | 1 00 | 1 00 |
| South west of Lot No. 1, Amelia Island | " 9, 1914 | 100 00 | | 100 00 |
| Lot Pa, South Head St | Jan. 10, 1916 | 10 00 | | 10 00 |
| Lot near Custom House, Quebec | August 31, 1915 | 1 00 | | 1 00 |
| Roadway from pier at Coteau Landing | July 1, 1909 | | 275 00 | 275 00 |
| Old Prov. Government building and grounds | June 24, 1915 | | 1 00 | 1 00 |
| Privilege to erect bridge on St. Charles River | Feb. 6, 1916 | 1 00 | 1 00 | 2 00 |
| Log building, former custom house, Shrewsburg, Ont | Sept. 11, 1914 | 1 00 | | 1 00 |
| Use of breakwater to store coal | Jan. 1, 1916 | | 1 00 | 1 00 |
| S. E. ¼ lot 8 | Dec. 8, 1915 | | 11 00 | 11 00 |
| Land Ile St. Christophe, River St. Maurice | " 1, 1915 | 1 00 | 1 00 | 2 00 |
| " " " | July 1, 1914 | 100 00 | | 100 00 |
| Portion of Assay office, New Westminister | | | 165 00 | 165 00 |
| " " " | | | 90 00 | 90 00 |
| Permit for bulkhead in Victoria Harbour | June 1, 1915 | 12 50 | | 12 50 |
| " " " | " 1, 1915 | 12 50 | | 12 50 |
| Privilege to build wharf on Lots A and C | " 1, 1915 | 25 00 | | 25 00 |
| Permit to build wharf, Lot A, Block 2, Sumas R | " 13, 1915 | 5 00 | | 5 00 |
| Permit for landing at Little Rapids | | | 70 00 | 70 00 |
| Leave to drain to main service public building | | | 1 00 | 1 00 |
| Tract of land and water lot, McNairn's Cove | Dec. 31, 1915 | 16 00 | | 16 00 |
| Land west side of Sydenham River | " 31, 1915 | | 2 00 | 2 00 |
| Lot on Ouillette St | | | 240 00 | 240 00 |
| Water Lot | Dec. 8, 1915 | | 30 00 | 30 00 |
| " | June 9, 1915 | | 2 00 | 2 00 |
| " | March 31, 1915 | | 5 00 | 5 00 |
| Right of way over strip of land | April 26, 1915 | 1 00 | 1 00 | 2 00 |
| Ground rent | " 4, 1915 | 1 00 | | 1 00 |
| | | $4,287 00 | $2,279 84 | $6,566 84 |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

No. 12.—HYDRAULIC AND OTHER RENTS, etc.,

| Description of Property. | Number. | Date to which the account is made up. | Balances transferred to Public Works Department by O.C. of April 27, 1909. | Totals. |
|---|---|---|---|---|
| | | | $ cts. | $ cts. |
| Hamilton and Port Dover and Caledonia Bridge | 1 | ..... | 12,092 83 | 12,092 83 |
| Lot No. 1, Wolfe street | 2 | ..... | 433 34 | 433 34 |
| " 9 " | 3 | ..... | 333 34 | 333 34 |
| " 49 " | 4 | ..... | 300 00 | 300 00 |
| " 73 and 74, Tower street | 5 | ..... | 147 80 | 147 80 |
| " 64, Wolfe street, and 211 and 252 Ware street | 6 | ..... | 248 40 | 248 40 |
| " 67 and 68, Monument street | 7 | ..... | 154 80 | 154 80 |
| " 22 and 23, Wolfe street | 8 | ..... | 600 00 | 600 00 |
| " 32, Wolfe street | 9 | ..... | 333 33 | 333 33 |
| " 65 and 66, Wolfe street | 10 | ..... | 533 33 | 533 33 |
| " 31, Wolfe street | 11 | ..... | 333 33 | 333 33 |
| " 135, Church street | 12 | ..... | 63 00 | 63 00 |
| | | | 15,573 50 | 15,573 50 |
| ..... | 1 | June 30, 1874.. | 6,298 25 | 6,298 25 |
| Lot No. 1, Wolfe street | 2 | May 1, 1889.. | 558 00 | 558 00 |
| " 9 " | 3 | " 1, 1889.. | 120 00 | 120 00 |
| " 49 " | 4 | " 1, 1889.. | 306 00 | 306 00 |
| " 73 and 74 Tower street | 5 | " 1, 1889.. | 155 22 | 155 22 |
| " 64, Wolfe street, and 211 and 252 Ware street | 6 | " 1, 1889.. | 275 82 | 275 82 |
| " 67 and 68, Monument street | 7 | " 1, 1889.. | 208 95 | 208 95 |
| " 22 and 23, Wolfe street | 8 | " 1, 1889.. | 828 00 | 828 00 |
| " 32, Wolfe street | 9 | Nov. 1, 1863.. | 190 00 | 190 00 |
| " 65 and 66, Wolfe street | 10 | " 1, 1863.. | 298 68 | 298 68 |
| " 31, Wolfe street | 11 | " 1, 1863.. | 35 91 | 35 91 |
| " 135, Church street | 12 | " 1, 1863.. | 100 00 | 100 00 |
| Monument Hotel | 13 | " 1, 1863.. | 100 00 | 100 00 |
| | | | 9,474 83 | 9,474 83 |

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 8, 1915.

SESSIONAL PAPER No. 19

Lessees' Accounts, 1914–15.

| Balances due on April, 1908. | Totals. | Number. | Location. | Name of Proprietors. |
|---|---|---|---|---|
| $ cts. | $ cts. | | | *Land sales—Principal Account.* |
| 12,092 83 | 12,092 83 | 1 | Hamilton and Port Dover road.. | Choat and Kern. |
| 133 34 | 433 34 | 2 | Bonner's property, Quebec.... | Timothy Sullivan, now M. Murphy. |
| 333 34 | 333 34 | 3 | .... ..... ..... | John Bailey, now Alex. Powell. |
| 300 00 | 300 00 | 4 | . ..... ..... | Abraham Thompson. |
| 147 80 | 147 80 | 5 | ..... | John Boomer. |
| 248 40 | 248 40 | 6 | .. ..... .... ..... | John Garbatz, now J. C. Nolan. |
| 154 80 | 154 80 | 7 | ..... ... | N. H. Bowen. |
| 600 00 | 600 00 | 8 | ..... | Estate Robert Reid. |
| 333 33 | 333 33 | 9 | ..... ..... ..... | John Chevalier. |
| 533 33 | 533 33 | 10 | ..... ..... | Daniel Holden. |
| 333 33 | 333 33 | 11 | .... ..... | George Creeley. |
| 63 00 | 63 00 | 12 | ..... ..... | Thomas McAdam. |
| 15,573 50 | 15,573 50 | | | *Land sales—Interest Account.* |
| 6,298 25 | 6,298 25 | 1 | Hamilton and Port Dover road... | Choat and Kern (matured). |
| 558 00 | 558 00 | 2 | Bonner's property, Quebec..... | Timothy Sullivan, now M. Murphy. |
| 120 00 | 120 00 | 3 | . ..... .... .... | John Bailey, now Alex. Powell. |
| 306 00 | 306 00 | 4 | ..... | Abraham Thompson. |
| 155 22 | 155 22 | 5 | ..... | John Boomer. |
| 275 82 | 275 82 | 6 | ..... ..... ..... | John Garabtz, now J. C. Nolan. |
| 208 95 | 208 95 | 7 | ..... ..... | N. H. Bowen. |
| 828 00 | 828 00 | 8 | ..... ..... | Estate Robert Reid. |
| 190 00 | 190 00 | 9 | ..... ..... | John Chevalier. |
| 298 68 | 298 68 | 10 | ..... | Daniel Holden. |
| 35 91 | 35 91 | 11 | ..... | George Creeley. |
| 100 00 | 100 00 | 12 | ..... ..... | Thomas McAdam. |
| 100 00 | 100 00 | 13 | ..... .. | Joseph Brook, tenant. |
| 9,474 83 | 9,474 83 | | | |

EDW. T. SMITH,
*Collector of Public Works Revenue.*

# PART VII

# MISCELLANEOUS

CONTRACTS LET BY THIS DEPARTMENT.
PROPERTY PURCHASED OR SOLD.
PROPERTY LEASED TO OR BY THE DEPARTMENT.
DIRECTOR'S REPORT, NATIONAL ART GALLERY.
NAMES OF CHIEF OFFICERS OF THE DEPARTMENT.
NAMES OF OFFICIALS EMPLOYED ON SLIDES AND BOOMS.
NAMES OF PERSONS EMPLOYED ON GRAVING DOCKS.
NAMES OF ENGINEERS, FIREMEN AND CARETAKERS OF PUBLIC BUILDINGS.

FOR THE

## FISCAL YEAR ENDED MARCH 31, 1915

LAW CLERK'S OFFICE,

OTTAWA, July 12, 1915.

SIR,—I have the honour to transmit the following statements concerning the transactions of the department during the last fiscal year, with respect to contracts and property, and which are required for insertion in the annual report, 1914-15, viz:—

No. 1.—Statement of contracts let by this department during the fiscal year ended March 31, past.

No. 2.—Statement of property purchased and sold by the department during the same period.

No. 3.—Statement of property leased to and by the said department during the same period.

No. 4.—A list of some of the Public Acts of the Parliament of Canada, passed at the last session, and Orders in Council having reference to the department.

I have the honour to be, sir,

Your obedient servant,

J. A. CHASSE,
*Law Clerk.*

R. C. DESROCHERS, Esq.,
Secretary of the Department of Public Works,
Ottawa, Ont.

# STATEMENT

SHOWING

1st.—CONTRACTS LET BY THE DEPARTMENT OF PUBLIC WORKS OF CANADA, FROM APRIL 1, 1914, TO MARCH 31, 1915.

2nd.—PROPERTY PURCHASED OR SOLD BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED MARCH 31, 1915.

3rd.—PROPERTY LEASED TO AND BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED MARCH 31, 1915.

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915.

| Works. | | | Name of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| PUBLIC BUILDINGS. | | | | | $ cts. |
| *Nova Scotia.* | | | | | |
| Amherst | Post office | Coal per ton—Bit. | Maritime Coal R. & P. Company | | 4 30 |
| " | Drill hall | Addition and alterations to | Rhodes Curry Co., Ltd | Oct. 28, 1914. | 14,514 00 |
| Annapolis | Post office | Coal per ton—Bit. | Annapolis Royal Coal Co. | | 6 00 |
| Antigonish | " | " " | Acadia Coal Co | | 4 30 |
| Arichat | " | " Ant., nut | C. P. Terrio | | 8 75 |
| Baddeck | " | " Bit | A. G. McDonald | | 4 75 |
| Bridgewater | " | " " | Intercolonial Coal Mining Co | | 5 60 |
| Canso | " | " Ant., egg | A. N. Whitman & Son | | 8 25 |
| " | " | " Bit | A. N. Whitman & Son | | 6 25 |
| " | " | Electric wiring and fittings | W. R. McCallum | Dec. 1, 1914. | 765 00 |
| Dartmouth | " | Coal per ton—Bit | Acadia Coal Co | | 4 15 |
| " | Public building | Construction of | Thompson & Theakston | July 16, 1914. | 48,228 00 |
| Digby | Post office | Coal per ton—Bit. | W. E. Van Blearcom | | 6 25 |
| Glace Bay | " | " " | Dominion Coal Co | | 4 10 |
| Guysborough | " | " " | Angus McDonald | | 6 25 |
| Halifax | New custom house | " " | Acadia Coal Co | | 4 15 |
| " | Post office | " " | Acadia Coal Co | | 4 15 |
| " | Immigration building | " " | Acadia Coal Co | | 4 15 |
| " | " | " Ant., nut | H. D. McKenzie | | 7 40 |
| " | Detention hospital | " " furn | H. D. McKenzie | | 7 35 |
| " | " | " " stove | H. D. McKenzie | | 7 40 |
| " | Examining warehouse | " Ant | S. Cunard & Co | | 8 15 |
| Inverness | Post office | " Bit | Inverness R. & Coal Co. | | 3 65 |
| Kentville | " | " " | Acadia Coal Co | | 4 85 |
| " | " | " Ant., egg | C. L. Dodge | | 7 80 |
| Liverpool | " | " Bit., | Southern Salvage Co. | | 5 00 |
| Lunenburg | " | " Ant., nut | A. & H. Anderson | | 7 25 |
| " | " | " " stove | A. & H. Anderson | | 7 25 |
| New Glasgow | " | " Bit | Acadia Coal Co | | 4 50 |
| North Sydney | " | " " | H. G. Campbell | | 3 50 |
| " | Immigration building | " " | H. G. Campbell | | 3 50 |
| Parrsboro | Post office | " " | W. J. Berry | | 4 50 |
| Pictou | Custom House | " " | International Coal Mining Co. | | 4 80 |
| " | Post office | " " | International Coal Mining Co. | | 4 80 |
| Shelburne | " | " " | Estate Joseph McGill | | 5 75 |
| Springhill | " | " " | Dominion Coal Co | | 4 25 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sydney | " | " | " | Dominion Coal Co | | | 3 50 |
| Sydney Mines | " | " | " | H. G. Campbell | | | 3 50 |
| Truro | " | " | " | J. H. Kent & Co | | | 4 75 |
| Westville | " | " | " | International Coal Mining Co | | | 4 25 |
| Windsor | " | " | " | J. H. Smith & Co | | | 4 70 |
| Yarmouth | " | " | Ant., nut | L. E. Baker & Co | | | 6 45 |
| " | " | " | " furn | L. E. Baker & Co | | | 6 45 |
| *Prince Edward Island.* | | | | | | | |
| Charlottetown | Dominion Buildings | Coal per ton | Bit | Lyons & Co | | | 4 97 |
| " | Old Bank building | " | Ant., egg | Geo. E. Full | | | 7 40 |
| " | " | " | Bit | A. Picard & Co | | | 5 05 |
| Georgetown | Post office | " | Ant., fur | Poole & Thompson | | | 7 65 |
| " | " | " | Bit | Poole & Thompson | | | 4 75 |
| " | " | " | Ant., nut | Poole & Thompson | | | 7 65 |
| Montague | " | " | Bit | Poole & Thompson | | | 4 75 |
| " | " | " | Ant., egg | Poole & Thompson | | | 7 65 |
| Souris | " | " | " " | A. Picard & Son | | | 8 00 |
| " | " | " | " stove | A. Picard & Son | | | 8 00 |
| " | " | " | " nut | A. Picard & Son | | | 8 00 |
| Summerside | " | " | " egg | Joseph Read & Co | | | 7 50 |
| " | " | " | Bit | R. T. Holman & Co | | | 5 00 |
| " | " | Fittings | | The J. T. Schell Co | | Nov. 23, 1914 | 1,273 00 |
| Tignish | " | Coal per ton | Bit | Tignish Trading Co | | | 7 50 |
| " | " | " | Ant., furn | Tignish Trading Co | | | 9 50 |
| *New Brunswick.* | | | | | | | |
| Bathurst | Post office | Coal per ton | Ant., egg | F. M. Burns & R. C. Rogers | | | 9 20 |
| Campbellton | " | " | Bit | R. K. Shives | | | 6 00 |
| Chatham | " | " | " | Ed. Johnson | | | 5 50 |
| " | " | " | Ant., egg | Ed. Johnson | | | 8 25 |
| Dalhousie | " | " | " furn | Charles Powell | | | 8 50 |
| " | " | " | Bit | Charles Powell | | | 7 00 |
| Fairville | " | " | Ant., egg | C. E. Colwell | | | 7 50 |
| " | " | " | " nut | C. E. Colwell | | | 7 50 |
| Fredericton | " | " | " furn | S. L. Morrison | | | 8 40 |
| " | " | " | " nut | S. L. Morrison | | | 8 50 |
| " | New building | " | " furn | S. L. Morrison | | | 8 69 |
| " | Post office | Fittings | | The Berlin Interior Hardwood Co. Ltd | | Feb. 25, 1915 | 2,575 00 |
| Grand Falls | " | Coal per ton | Ant., furn | J. L. White | | | 10 00 |
| " | " | " | " stove | J. L. White | | | 10 25 |
| Hampton | " | Fittings | | Edward Bates | | July 27, 1914 | 1,017 00 |
| Hartland | " | Coal per ton | Bit | W. F. Dibblee & Son | | | 7 75 |
| " | " | " | Ant., egg | W. F. Dibblee & Son | | | 9 25 |
| Marysville | " | " | " " | Geo. R. Stoat | | | 9 35 |
| " | " | " | " nut | Geo. R. Stoat | | | 9 35 |
| Milltown | Public building | Construction of | | Joseph MacVay & Son | | May 4, 1914 | 30,000 00 |
| " | Post office and customs | Fittings | | Haley & Son | | Jan. 16, 1915 | 1,159 00 |

No. 1.—Contracts let by the Department of Public Works of Canada, from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|---|
| | | | | | | $ cts. |
| **Public Buildings.** | | | | | | |
| *New Brunswick*—Con. | | | | | | |
| Newcastle | Post office | Coal per ton | Ant., furn | The Stothart Mercantile Co | | 7 75 |
| " | " | " | Bit | The Stothart Mercantile Co | | 5 60 |
| Richibucto | " | " | Ant., fur | Richard O'Leary | | 8 70 |
| " | " | " | " nut | Richard O'Leary | | 8 95 |
| St. John | Old post office | Coal per ton | Ant. furnace | R. P. & W. F. Starr | | 6 75 |
| " | " | " | " stove | R. P. & W. F. Starr | | 7 00 |
| " | " | " | Bit | R. P. & W. F. Starr | | 4 50 |
| " | New post office | " | Ant., furnace | R. P. & W. F. Starr | | 6 90 |
| " | Savings bank | " | " egg | J. S. Gibbon & Co | | 7 40 |
| " | " | " | Bit | R. P. & W. F. Starr | | 4 50 |
| " | Custom house | " | Ant., furn | R. P. & W. F. Starr | | 6 75 |
| " | " | " | " stove | J. S. Gibbon & Co | | 8 65 |
| " | " | " | Bit | R. P. & W. F. Starr | | 4 50 |
| " | Immigration building | " | Bit | R. P. & W. F. Starr | | 4 50 |
| " | " | " | Ant., furn | C. E. Colwell | | 7 25 |
| " | " | " | " nut | C. E. Colwell | | 7 50 |
| " | (West) Post office | " | " stove | C. E. Colwell | | 7 50 |
| " | " | Supply and installation of one (1) passenger and one (1) freight elevator and one (1) ash hoist | | The Turnbull Elevator M'f'g. Co | Dec. 28, 1914 | 7,200 00 |
| St. Stephen | " | Coal per ton | Ant., egg | G. H. Budd | | 7 00 |
| " | " | " | " nut | G. H. Budd | | 7 25 |
| " | Immigration building | " | " egg | G. H. Budd | | 7 00 |
| Sussex | Post office | " | " " | T. H. Brown | | 9 00 |
| " | " | " | " nut | T. H. Brown | | 9 00 |
| Tracadie Lazaretto | | " | " egg | The Stothart Mercantile Co | | 10 25 |
| " | | " | " nut | The Stothart Mercantile Co | | 8 25 |
| Woodstock | Post office | " | Scotch | Burtt Hardware Co | | 9 00 |
| *Quebec.* | | | | | | |
| Actonvale | Post office | Coal per ton | Ant. egg | V. J. Mongeau | | 9 00 |
| Arthabaska | " | " | " " | O. Gaudet | | 8 75 |
| Aylmer | " | " | " " | Aylmer Coal & Supply Co | | 7 25 |
| " | " | " | " nut | Aylmer Coal & Supply Co | | 7 50 |
| Berthierville | " | " | Ant., stove | F. O. Lamarche | | 10 00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Buckingham | Post office | " | " | egg | The Traders Coal Co | 7 75 |
| " | " | " | " | nut | The Traders Coal Co | 8 00 |
| Chicoutimi | " | " | " | furn | G. P. Marcotte | 8 70 |
| Coaticook | " | " | " | furn | B. J. Smith & Son | 7 25 |
| " | " | " | " | nut | B. J. Smith & Son | 7 25 |
| " | Drill hall | Construction of | | | W. J. Welch | May 14, 1914 | 30,000 00 |
| Dundee | Post office | Coal per ton—Ant., stove | | | A. S. Matthews | 7 25 |
| Drummondville | " | " | Ant., furn | | Jimmy Hamel | 8 75 |
| East Angus | Public building | Construction of | | | Loomis Dakin, Ltd | June 10, 1914 | 32,500 00 |
| Farnham | Post offices | Coal per ton—Ant., egg | | | A. Giroux | 7 20 |
| Fraserville | " | " | " | " | E. A. Doucet | 9 25 |
| Granby | " | " | " | " | P. Phoenix | 7 50 |
| Grosse Isle | Quarantine station | Supply and installation of dynamo, electric machinery, switchboard, etc | | | A. Gravel & Co | May 15, 1914 | 5,190 00 |
| " | Third-class detention building | Construction of | | | P. Lyal & Sons Construction Co. Ltd | Nov. 3, 1914 | 45,848 00 |
| Hochelaga | Post office | Coal per ton—Ant., egg | | | Merchants Coal Co | 7 75 |
| " | " | " | " | nut | Merchants Coal Co | 8 00 |
| " | " | Alterations, vaults, iron stairs, etc | | | J. A. Major & Co | July 9, 1914 | 2,937 00 |
| Hull | " | Coal per ton—Ant., furn | | | Hull Coal Co | 7 75 |
| Iberville | " | " | " | stove | J. Donaghy | 6 25 |
| Joliette | " | " | " | egg | Menard & Geoffrey | 7 25 |
| " | Public building | Alterations and additions to | | | Jos. Archambault & Co | July 17, 1914 | 29,945 00 |
| Jonquieres | Post office | Construction of | | | Marois & Girard | June 27, 1914 | 20,850 00 |
| Knowlton | " | Coal per ton—Ant., furn | | | Davignon & Pratt | 7 56 |
| Lachine | " | " | " | stove | Martin & Co | 7 50 |
| " | " | " | " | nut | Martin & Co | 7 75 |
| Lachute | " | " | " | egg | W. H. Ayers | 8 00 |
| " | " | " | " | nut | W. H. Ayers | 8 25 |
| Lapairie | " | " | " | egg | Demers & McGee | 7 25 |
| " | " | " | " | nut | Demers & McGee | 7 50 |
| " | " | Electric wiring and fittings | | | W. R. McCallum | July 15, 1914 | 657 60 |
| L'Assomption | " | Coal per ton—Ant., egg | | | Chas. Rho | 8 00 |
| Levis | " | " | " | " | P. Robitaille | 7 00 |
| Longueuil | " | " | " | furn | Thos. Millette | 6 50 |
| Louiseville | " | " | " | egg | Tel. Beland | 7 75 |
| " | " | Fittings | | | The J. T. Schell Company | Aug. 20, 1914 | 1,017 00 |
| Magog | " | Coal per ton—Ant., egg | | | T. B. Mullins | 7 35 |
| Marieville | " | " | " | nut | W. F. Poulin | 7 75 |
| " | " | " | " | egg | W. F. Poulin | 7 50 |
| Matane | " | " | " | " | Paul Savard | 12 00 |
| " | Public building | Fittings | | | Office Specialty Mfg Co., Ltd | Jan. 27, 1915 | 1,500 00 |
| Megantic | Post office | Coal per ton—Ant., egg | | | A. H. Evans | 8 85 |
| Montmagny | " | " | " | " | Eug. Bernatchez | 8 00 |
| Montreal | Custom house | " | " | furn | F. Robertson | 7 50 |
| " | Examining warehouse | " | Bit | | F. Robertson | 4 10 |
| " | New examining warehouse | " | Ant., furn | | Evans Bros | 7 50 |
| " | Post office 'B' | " | " | egg | P. McCrory Coal Co | 7 75 |
| " | " 'C' | " | " | furn | P. McCrory Coal Co | 7 50 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| | | PUBLIC BUILDINGS. | | | |
| | | *Quebec.*—Continued. | | | $ cts. |
| Montreal | Postal Stn. 'D' | Coal per ton—Ant. furn., | P. McCrory Coal Co | | 7 50 |
| " | " 'D' | " " egg | P. McCrory Coal Co | | 7 75 |
| " | " 'E' | " " " | P. McCrory Coal Co | | 7 75 |
| " | " 'F' | " " " | Merchants Coal Co | | 7 75 |
| " | " 'H' | " " furn | Andrew Baile | | 7 50 |
| " | " 'L' (Westmount) | " " egg | Merchants Coal Co | | 7 75 |
| " | Postal station "N" | Coal per ton.—Ant., egg | F. Robertson | | 7.75 |
| " | Revenue building | " " " | Evans Bros | | 7.75 |
| " | Immigration building | " " stove | F. Robertson | | 7.75 |
| " | " | " " furnace | F. Robertson | | 7.50 |
| " | Postal station "S" | " " egg | Andrew Baile | | 7.75 |
| " | " | " " nut | Andrew Baile | | 8.00 |
| " | Detention hospital | " " egg | Evans Bros | | 7.75 |
| " | Garage, 700 University Street | Alterations and addition to | J. & W. Morrison | Oct. 24, 1914 | 4,270 00 |
| " | Examining warehouse | Supply and installation of two electric passenger and six freight elevators | Otis Fensom Elevator Co., Ltd | Dec. 22, 1914 | 28,646 00 |
| " | Postal station "H" | Fittings | R. A. Sproule | Dec. 28, 1914 | 3,997 00 |
| " | Federal buildings | Supply of electric energy for lighting, power, etc | The Montreal Light, Heat & Power Co | Feb. 6, 1915 | Sched. of prices 5 years from Jan. 1, 1915, and thereafter from year to year. |
| " | Postal station "F" | Fittings | The Berlin Office and Fixture Co., Ltd | Feb. 15, 1915 | 2,300 00 |
| " | Postal station "L" | Fittings | Cassel & Son | March 27, 1915 | 1,797.00 |
| Murray Bay | Public building | Construction of | Alfred Lapointe | July 15, 1914 | 20,800.00 |
| Nicolet | Post office | Coal per ton.—Ant., egg | J. B. Lemay | | 8.00 |
| Pierreville | " | " " stove | Shooner & Co | | 7.30 |
| " | " | " " egg | Shooner & Co | | 7.75 |
| Plessisville | " | " " egg | La Fonderie de Plessisville | | 9.60 |
| Quebec | Marine Agency | " " furnace | Canadian Import Co | | 7.20 |
| " | Custom house | " " furnace | Madden & Son | | 7.05 |
| " | " | " " egg | Madden & Son | | 7.20 |
| " | Examining warehouse | " " furnace | Canadian Import Co | | 7.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| " | | Immigration office | " | " | egg | N. H. Gilbert | | | 7.25 |
| " | | " | " | " | stove | Canadian Import Co. | | | 7.35 |
| " | | Immigration building | " | Bit | | Canadian Import Co. | | | 4.85 |
| " | | " | " | Ant., egg | | Canadian Import Co. | | | 7.35 |
| " | | " | " | " | stove | Canadian Import Co | | | 7.35 |
| | | Governor General's quarters | " | " | furnace | Canadian Import Co | | | 7.55 |
| " | | " | " | " | stove | Canadian Import Co. | | | 7.70 |
| " | | Weights and Measures | " | " | furnace | Canadian Import Co | | | 7.15 |
| " | | " | " | " | egg | Madden & Son | | | 7.30 |
| " | | Immigration hospital | " | " | egg | Canadian Import Co. | | | 7.85 |
| " | | " | " | " | stove | Canadian Import Co | | | 7.85 |
| " | | Post office | " | " | furnace | Canadian Imp rt Co | | | 7.25 |
| " | | " | " | " | stove | Canadian Import Co | | | 7.45 |
| " | | Immigration building | Fittings | | | Napoleon Gignac | June 2, 1914 | 5,730.83 | |
| " | | " | Construction of | | | Chas. Edw. Deakin | June 24, 1914 | 129,000.00 | |
| " | | " | Three (3) boilers for | | | The Jenckes Machine Co., Ltd | Jan. 30, 1915 | 1,995.00 | |
| " | | Examining warehouse | Alterations to | | | A. B. See Electric Elevator Co. of Canada Ltd | March 18, 1915 | 9,500.00 | |
| " | (St. Roch) | Post office | Coal per ton.—Ant., furnace | | | Madden & Son | | | 7.00 |
| Richmond | | " | " | " | egg | S. E. Desmarais & Co | | | 6.90 |
| Rigaud | | " | " | " | egg | Pariseau & Bros | | | 9.00 |
| " | | " | " | " | nut | Pariseau & Bros | | | 9.00 |
| Rimouski | | " | " | " | egg | H. G. Lepage | | | 8.70 |
| Roberval | | " | " | " | egg | G. P. Marcotte | | | 8.70 |
| " | | " | " | " | nut | G. P. Marcotte | | | 8.70 |
| Rock Island | | " | " | " | egg | C. H. Kathan | | | 7.50 |
| " | | " | " | " | nut | C. H. Kathan | | | 7.75 |
| Shawinigan | | " | " | " | egg | C. H. Flamand | | | 8.25 |
| Shawville | | Public building | Construction of | | | The Howard & Elliott Lumbering Co | Jan. 25, 1915 | 19,956.00 | |
| Sherbrooke | | Post office | Coal per ton.—Ant., egg | | | Coderre & Son | | | 7.35 |
| Sorel | | " | " | " | furnace | Leclaire & Son | | | 7.90 |
| " | | " | Fittings | | | D. Peloquin | May 12, 1914 | 2,379.00 | |
| Ste Agathe des Monts | | Public building | Construction of | | | R. & J. A. Grou | June 23, 1914 | 34,200.00 | |
| St. Gabriel de Brandon | | Post office | Coal per ton.—Ant., egg | | | Ulric Roch | | | 7.95 |
| St. Gabriel de Brandon | | " | Fittings | | | The J. T. Schell Company | Nov. 18, 1914 | 1,031.00 | |
| St. Henri | | " | Coal per ton.—Ant., egg | | | Merchants Coal Co | | | 7.75 |
| St. Hyacinthe | | " | " | " | egg | Jos. Surprenant | | | 6.75 |
| " | | Revenue building | " | " | egg | Jos. Surprenant | | | 6.75 |
| St. Jerome | | Post office | " | " | egg | Sylvio Lebel | | | 8.00 |
| St. Johns | | Old post office | " | " | egg | J. Donaghy | | | 6.10 |
| " | | New post office | " | " | egg | J. Donaghy | | | 6.10 |
| " | | Post office | " | " | stove | Jos. Donaghy | | | 6.10 |
| St. Lambert | | " | " | " | egg | C. W. Smiley | | | 7.40 |
| St. Laurent (Jacques Cartier) | | Public building | Concrete walk, grading filling, etc | | | R. & J. A. Grou | July 11, 1914 | 6,350.00 | |
| St. Laurent (Jacques Cartier) | | Post office | Fittings | | | P. E. Bourassa & Son | Oct. 27, 1914 | 2,751.00 | |

No. 1.—Contracts let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| | | Public Buildings.—*Continued.* | | | $ cts. |
| | | *Québec.*—Continued. | | | |
| St. Laurent (Jacques Cartier) | Post office | Coal per ton.—Ant., egg | Odilas Crevier | | 6.95 |
| St. Louis (Mile End) | " | " " egg | Merchants Coal Co | | 7.75 |
| St. Sauveur | " | " " egg | Jos. Gingras | | 7.95 |
| Ste Therese de Blainville | " | " " furnace | P. Desjardins | | 8.10 |
| Ste Therese de Blainville | " | Fittings | R. A. Sproule | Sept. 11, 1914 | 865 00 |
| Terrebonne | " | Coal per ton.—Ant., egg | M. Moody & Sons | | 7.50 |
| Thetford Mines | " | " " egg | P. E. Beaudoin | | 9.50 |
| Three Rivers | " | " " egg | L. Marchand & Son | | 7.00 |
| Valleyfield | " | " " egg | N. Langevin | | 7.50 |
| Victoriaville | " | " " egg | Oct. Gaudet | | 8.00 |
| Ville Emard | " | " " egg | Geo. Hall Coal Co | | 7.75 |
| | | *Ontario.* | | | |
| Acton | Post office | Coal per ton.—Ant., egg | J. C. Hill | | 7.25 |
| Alexandria | " | " " egg | Angus McDonald Coal Co | | 7.15 |
| Almonte | " | " " egg | T. R. White | | 7.20 |
| " | " | " " nut | T. R. White | | 7.45 |
| " | " | Addition to | J. Bradford & H. V. Serson | Oct. 23, 1914 | 2,232 00 |
| " | " | Electric wiring and fittings | Crooks Electric Supply Company | Dec. 28, 1914 | 750 00 |
| Amherstburg | Post office | Coal per ton.—Ant., furn | McGee Coal Company | | 7.05 |
| Arnprior | " | " " egg | J. S. Moir | | 8.00 |
| Athens | " | " " egg | G. N. Purcell | | 8.40 |
| Aurora | Public building | Construction of | W. T. Bath, W. E. Anderson & D. A. Patchell | May 18, 1914 | 23,333 00 |
| " | " | Alterations and additions to | W. T. Bath, W. E. Anderson & D. A. Patchell | Feb. 15, 1915 | 3,132 00 |
| Aylmer | Post office | Fittings | The J. T. Schell Company | June 12, 1914 | 1,637 00 |
| " | " | Coal per ton—Ant., egg | F. P. Frank | | 7.40 |
| Barrie | " | " " egg | Lewis & Company | | 7.20 |
| " | Drill hall | Construction of | The W. A. Tom Construction Company, Ltd | Aug. 20, 1914 | 54,312 80 |
| Belleville | Post office | Coal per ton—Ant., stove | N. Allen | | 6.64 |
| Berlin | " | " " egg | Kloepfer & Company | | 7.00 |
| " | " | " " egg | A. A. Pipe | | 7.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bowmanville | " | " | stove | E. W. Loscombe | | | 7 50 |
| " | " | " | nut | E. W. Loscombe | | | 7 50 |
| Bracebridge | " | " | stove | G. W. Ecclestone | | | 8 00 |
| " | " | Fittings | | The Berlin Interior Hardwood Company, Ltd. | Nov. | 9, 1914 | 1,250 00 |
| Brampton | " | Coal per ton | Ant., stove | J. H. Conover | | | 7 50 |
| " | " | " | " nut | J. H. Conover | | | 7 50 |
| " | " | Fittings | | The Berlin Interior Hardwood Company, Ltd. | Sept. | 4, 1914 | 1,036 00 |
| Brantford | " | Coal per ton | Ant., egg | Wilson Coal Company | | | 6 45 |
| " | " | " | " nut | Wilson Coal Company | | | 6 45 |
| " | Public building | One passenger elevator | | The Turnbull Elevator Manufacturing Company | Dec. | 15, 1915 | 3,965 00 |
| " | Post office and customs | Fittings | | R. A. Sproule | Dec. | 28, 1914 | 5,790 00 |
| Bridgeburg | Post office | Coal per ton | Ant., furn | Mrs. Isaac White | | | 6 60 |
| Brockville | " | " | egg | Brockville Lumber Company | | | 7 50 |
| " | " | " | " stove | Brockville Lumber Company | | | 7 50 |
| Burford | Public building | Construction of | | P. H. Secord & Sons Limited | Nov. | 9, 1914 | 18,211 00 |
| Carleton Place | Post office | Coal per ton | Ant., egg | Taylor Bros | | | 7 85 |
| " | " | Fittings | | Office Specialty Manufacturing Company, Ltd. | Nov. | 11, 1914 | 1,125 00 |
| Chatham | " | Coal per ton | Ant., furn | A. R. Crow | | | 6 40 |
| Chesley | " | " | egg | C. E. Lloyd | | | 7 50 |
| " | " | " | " nut | C. E. Lloyd | | | 7 50 |
| Cobourg | " | " | egg | George Plunkett | | | 7 00 |
| " | Immigration office | " | " nut | George Plunkett | | | 7 25 |
| Cornwall | Post office | " | egg | W. C. McGuire | | | 7 45 |
| " | " | " | " nut | W. C. McGuire | | | 7 45 |
| " | " | Electric wiring and fittings | | W. R. McCallum | Jan. | 15, 1915 | 1,200 00 |
| Deseronto | " | Coal per ton | Ant., egg | The Rathbun Company | | | 7 50 |
| Dresden | " | " | " furn | H. E. Wells | | | 8 00 |
| " | " | " | " nut | H. E. Wells | | | 8 25 |
| Dundas | " | " | " furn | J. A. Starrock | | | 6 85 |
| " | " | " | " nut | Woodhouse & Company | | | 4 71 |
| Eganville | " | " | " egg | John George | | | 8 10 |
| " | " | Fittings | | Office Specialty Manufacturing Company, Ltd. | Feb. | 4, 1915 | 880 00 |
| Elora | " | Coal per ton | Ant., furn | E. French | | | 7 18 |
| " | " | " | " egg | E. French | | | 7 18 |
| Fergus | " | " | " furn | Peter McGregor | | | 7 35 |
| " | " | " | " nut | Peter McGregor | | | 7 60 |
| Fort William | " | " | " egg | James Murphy | | | 7 50 |
| Galt | " | " | " egg | Scott & Hogg | | | 6 95 |
| " | Drill hall | Construction of | | P. H. Secord & Sons, Limited | June | 17, 1914 | 61,246 00 |
| Gananoque | Custom house | Coal per ton | Ant., egg | James Taylor & Sons | | | 7 00 |
| " | " | " | Bit | Citizens Coal & Fuel Company | | | 5 00 |
| " | Post office | " | Ant., egg | James Taylor & Sons | | | 7 00 |
| Glencoe | " | " | furn | McPherson & Clark | | | 75 |
| " | " | " | nut | McPherson & Clark | | | 6 90 |
| Goderich | " | " | egg | H. J. A. McEwan | | | 7 25 |
| " | " | " | nut | H. J. A. McEwan | | | 7 50 |
| Grimsby | " | " | egg | J. H. Gibson | | | 7 00 |
| " | Public building | Fittings | | The Berlin Interior Hardwood Company, Ltd. | Aug. | 21, 1914 | 921 00 |
| Guelph | Post office | Coal per ton | Ant., egg | Kloepfer & Company | | | 6 3 |
| Hamilton | " | " | egg | Thomas Myles & Sons | | | 0 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|
| | PUBLIC BUILDINGS—*Continued.* | | | |
| | *Ontario*—Continued. | | | $ cts. |
| Hamilton | Post office—Coal per ton—Bit | Gillies-Guy | | 5 00 |
| " | Weights and measures and gas offices " " egg | Thomas Myles Sons | | 5 90 |
| Hanover | Post office " " egg | W. H. Edyt | | 7 25 |
| Harriston | " " " furn | W. McConnel | | 7 39 |
| " | " " " nut | W. McConnel | | 7 84 |
| Hawkesbury | " " " egg | W. Wilson | | 7 75 |
| Ingersoll | " " " furn | Scott & Daniels | | 7 56 |
| " | Public building—Alterations to | Nagle & Mills | July 2, 1914 | 16,250 00 |
| " | Post office—Fittings | The Berlin Office and Fixture Company, Ltd. | Nov. 21, 1914 | 1,480 00 |
| Kemptville | " Coal per ton—Ant., egg | H. Hutchins | | 7 75 |
| " | " " " nut | H. Hutchins | | 8 00 |
| " | " Fittings | The J. T. Schell Company | June 12, 1914 | 1,081 00 |
| Kenora | " Coal per ton—Ant., furn | Cameron & Heap | | 9 65 |
| Kincardine | " " " furn | J. W. Wilson | | 6 85 |
| " | " " " nut | W. Burnside | | 7 10 |
| Kingston | Custom house " " egg | S. Anglin & Company | | 7 50 |
| " | " " " nut | S. Anglin & Company | | 7 50 |
| Kingston | Post office—Coal per ton—Ant. Egg | S. Anglin & Co | | 7 50 |
| " | " " " Nut | S. Anglin & Co | | 7 50 |
| " | Inland revenue " " Egg | S. Anglin & Co | | 7 50 |
| " | " " " Nut | S. Anglin & Co | | 7 50 |
| Lakefield | " " " Egg | W. J. Charlton | | 7 50 |
| Leamington | " " " Furn | D. Smith | | 6 60 |
| Lindsay | Post office " " Egg | McLennan & Co | | 7 30 |
| " | " " " Nut | McLennan & Co | | 7 55 |
| " | Public building—Construction of | James Bogue | April 6, 1914 | 18,787 00 |
| " | Post office—Fittings | Office Specialty Manufacturing Co. Ltd | Oct. 28, 1914 | 2,150 00 |
| Listowel | " Coal per ton—Egg | R. T. Kemp & Son | | 7 00 |
| " | " " Nut | Oliver & Ellis | | 7 00 |
| " | Drill hall—Construction of | The W. A. Tom Construction Co. Ltd. | July 30, 1914 | 17,888 00 |
| London | Custom house—Coal per ton—Ant., furn | T. Patterson & Co | | 6 75 |
| " | " " Bit | T. Patterson & Co | | 4 10 |
| " | Post office " Ant. Egg | T. Patterson & Co | | 6 75 |
| Markham | " " " Stove | R. Walsh | | 7 40 |
| Midland | " " " Egg | The Sargeant Co | | 7 50 |

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|---|---|---|---|---|---|---|
| " | " | Fittings | The Berlin Interior Hardwood Co. Ltd. | June 19, 1914 | 1,195 00 | |
| Milton | Public building | Construction of | Sam Henson | June 15, 1914 | 19,990 00 | |
| Mitchell | Post office | Coal per ton—Ant., Furn. | R. J. Cook | | 7 25 | |
| " | " | " " Nut | R. J. Cook | | 7 25 | |
| Mount Forest | " | " " Furn. | T. F. Tamgney | | 7 25 | |
| " | " | " " Nut | T. F. Tamgney | | 7 25 | |
| Napanee | " | " " Nut | P. Gleeson | | 8 00 | |
| " | " | " " Stove | P. Gleeson | | 7 75 | |
| " | Drill hall | Construction of | A. S. Allaster | July 22, 1914 | 42,322 00 | |
| " | " | Additional changes | A. S. Allaster | Oct. 13, 1914 | 4,570 00 | |
| Newmarket | Public building | Construction of | P. H. Secord & Sons Ltd. | April 21, 1914 | 27,382 00 | |
| " | Post office and customs | Fittings | The Berlin Interior Hardwood Co. Ltd. | Jauv. 6, 1915 | 1,918 00 | |
| Niagara Falls | Post office | Coal per ton—Ant., Egg | W. E. Thomas | | 5 99 | |
| " | " | " " Nut | W. E. Thomas | | 6 23 | |
| North Bay | " | " " Egg | North Bay Fuel Co. | | 7 25 | |
| Norwich | Public building | Construction of | Nagle & Mills | July 2, 1914 | 23,555 00 | |
| Ontario | Post offices generally | Supply of 200 four cap drawers vertical cabinets | Office Specialty Manufacturing Co. Ltd | June 24, 1914 | 5,490 00 | |
| " | " " | Supply of 100 cabinets | The Steel Equipment Co. Ltd | Janv. 12, 1915 | 2,400 00 | |
| " | " " | Supply of post office fittings | Office Specialty Manufacturing Co. Ltd. | March 12, 1915 | 2,195 00 | |
| " | " " | " " " | The Chas. Rogers & Sons Co. Ltd | March 13, 1915 | 1,229 00 | |
| " | " " | " " " | P. E. Bourassa & Son | " 12, 1915 | 1,175 00 | |
| " | " " | " " " | The Berlin Office & Fixture Co. Ltd | " 18, 19 5 | 360 00 | |
| " | " " | " " " | The Burton Baldwin Manufacturing Co. Ltd | " 25, 1915 | 168 00 | |
| " | " " | " " " | The Berlin Interior Hardwood Co. Ltd | " 26, 1915 | 210 00 | |
| Orillia | Post office | Coal per ton—Ant., Egg | S. E. Carss Lumber Co. | | 7 00 | |
| " | " | " " Nut | S. E. Carss Lumber Co. | | 7 00 | |
| " | " | Fittings | Office Specialty Manufacturing Co. Ltd | Nov. 11, 1914 | 1,793 00 | |
| Oshawa | " | Fittings | W. J. Trick Co. | July 23, 1914 | 1,447 00 | |
| " | " | Coal per ton, Ant., Stove | J. H. Downey & Co | | 6 90 | |
| " | " | " " Nut | H. E. Smith | | 7 25 | |
| Ottawa | Experimental farm | " " Furn | C. C. Ray | | 7 20 | |
| " | " | " " Egg | C. C. Ray | | 7 65 | |
| " | " | " " Nut | C. C. Ray | | 7 90 | |
| " | " | " " Stove | C. C. Ray | | 7 70 | |
| " | Public building | Supply and delivery of ice, per 100 lb | The Artificial Ice Co. Ltd | May 6, 1914 | 0 20 | |
| " | Governor general secretary's office | Alterations and additions to | Office Specialty Manufacturing Co. Ltd | " 6, 1914 | 1,135 00 | |
| " | Record Room (Trade and Commerce | Additional metallic fittings | Office Specialty Manufacturing Co. Ltd | " 7, 1914 | 1,125 00 | |
| " | Parliament and departmental buildings | Supply of electric materials | Canadian General Electric Co. Ltd. | " 27, 1914 | 29,195 00 | |
| " | Post office department | Metallic fittings | Steel Equipment Co. Ltd | June 29, 1914 | 1,568 00 | |
| " | " " | Metallic cases for | Steel Equipment Co. Ltd | July 4, 1914 | 5,975 00 | |
| " | Public buildings | Supply and delivery of coal | John Heney & Son Ltd | " 10, 1914 | Sched. of prices. | |
| " | West block | Metallic fittings for contract plans | Office Specialty Manufacturing Co. Ltd | " 31, 1914 | 650 00 | |
| " | Observatory | Revolving door | T. Cork & Sons Limited | Aug. 8, 1914 | 1,737 40 | |
| " | East block | Materials for heating system | Dominion Radiator Co. Ltd. | " 13, 1914 | 10,200 00 | |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| | | PUBLIC BUILDINGS.—*Continued.* | | | |
| | | *Ontario.*—Continued. | | | $ cts. |
| Ottawa | Rideau Hall | Alterations to heating and ventilation system | P. Lyall & Sons Construction Co. Ltd | Aug. 13 1914 | 10,000 00 |
| " | Customs building | Construction of | P. Lyall & Sons Construction Co. Ltd | " 28, 1914 | 1,173,000 00 |
| " | East block | Laying of mastic on foundations, and 15,000 square yards of squeegee square yards and pavement | E. McMahon | " 30, 1914 | Pr. sq. yd. 0 42 |
| | | | E. McMahon | " 30, 1914 | 2 55 |
| | | | E. McMahon | " 30, 1914 | 2,900 00 |
| " | (Record Room) Interior Department | Installations of 6 filing cabinets | Steel Equipment Co. Ltd | Sept. 16, 1914 | 672 00 |
| " | Railway Commission | Filing cases | Steel Equipment Co. Ltd | Nov. 26, 1914 | 1,798 00 |
| " | Custom house | Change in grillage | P. Lyall & Sons Construction Co. Ltd | Dec. 5, 1914 | 1,689 67 |
| " | Langevin Block | Three passenger and one freight elevators | The General Supply Co. of Canada Ltd | " 26, 1914 | 24,928 00 |
| " | Post office | One freight elevator | A. B. See Electric Elevator Co. of Canada Ltd | March 8, 1915 | 5,910 00 |
| Owen Sound | " | Coal per ton—Ant., Egg | Davis, Smith & Malone Co | | 6 90 |
| Palmerston | Public building | Construction of | E. A. Bleakney | Feb. 15, 1915 | 39,770 00 |
| Paris | Post office | Coal per ton—Ant., Egg | Paris C. & L Co | | 6 90 |
| " | " | " " Stove | Paris C. & L. Co | | 6 90 |
| Parkhill | " | " " " | Wm. Leary | | 7 00 |
| " | " | " " " | Parkhill L. & M. Co | | 7 00 |
| " | " | " " Nut | Wm. Leary | | 7 25 |
| " | " | " " " | Parkhill L. & M. Co | | 7 25 |
| Pembroke | Post office | Coal per ton—Ant., egg | Dunlop & Company | | 8 20 |
| " | " | " " nut | Dunlop & Company | | 8 45 |
| " | " | Fittings | W. J. Trick Co | Nov. 27, 1914 | 2,273 00 |
| " | Public building | Alterations to | W. Beatty | Nov. 19, 1914 | 2,500 00 |
| Peterborough | Post office | Coal per ton—Ant., egg | J. G. A. Fitzgerald | | 6 90 |
| " | Custom house | " " stove | J. G. A. Fitzgerald | | 6 90 |
| Picton | Post office | " " egg | Hyatt & Rolston | | 7 25 |
| " | " | " " stove | Hyatt & Rolston | | 7 25 |
| " | " | " " nut | Hyatt & Rolston | | 7 50 |
| Port Arthur | " | " " egg | Whitehead & Co | | 7 75 |
| " | " | " " nut | Louis Walsh Coal Co | | 8 00 |
| " | Immigration office | " " nut | Louis Walsh Coal Co | | 8 00 |
| " | Examining warehouse | Stone cornice instead of galvanized iron | Marsh, Hutton, Powers Co | Oct. 22, 1914 | 5,980 40 |

| | | | | | | |
|---|---|---|---|---|---|---|
| " | " | " | Supply and installation of one passenger and two freight elevators | Otis Fensom Elevator Co. Ltd. | March 23, 1915 | 8,228 00 |
| Port Colborne | Post office | Coal per ton—Ant., egg | | G. De W. Carter | | 6 70 |
| Port Hope | " | " | egg | E. Brown & Company | | 7 50 |
| " | " | " | nut | E. Brown & Company | | 7 50 |
| Port Perry | " | " | egg | A. Orchard | | 7 00 |
| " | " | " | nut | A. Orchard | | 7 25 |
| Prescott | Custom house | " | egg | J. W. Plumb & Son | | 6 75 |
| " | Post office | " | egg | J. W. Plumb & Son | | 6 75 |
| Preston | " | " | egg | Geo. Winterhalt | | 7 00 |
| " | Public building | Substitution of black slate for galvanized roof covering, etc. | | Geo. A. Proctor | May 16, 1914 | 1,500 00 |
| " | Post office and Customs | Fittings | | The J. T. Schell Company | Dec. 23, 1914 | 2,747 00 |
| Renfrew | Post office | Coal per ton—Ant., stove | | James Ward | | 7 75 |
| " | " | " | nut | James Ward | | 8 00 |
| Sandwich | " | " | egg | E. Breault | | 7 00 |
| Sault Ste. Marie | " | " | furn. | James Lyons | | 8 00 |
| " | " | " | egg | James Lyons | | 8 25 |
| Seaforth | " | " | egg | H. P. Thompson | | 6 90 |
| " | " | " | nut | Wm. Sclater | | 7 00 |
| Shelburne | " | " | egg | R. A Jelly | | 8 50 |
| " | " | Fittings | | The J. T. Schell Company | Nov. 3, 1914 | 957 00 |
| Smiths Falls | " | Coal per ton—Ant., egg | | A. Foster | | 7 25 |
| " | " | " | nut | A. Foster | | 7 40 |
| " | Public building | Alterations and additions | | G. T. Martin | April 24, 1914 | 20,193 00 |
| Steelton | Post office | Coal per ton—Ant., egg | | James Lyons | | 8 25 |
| " | " | Fittings | | The Berlin Interior Hardwood Co. Ltd | Nov. 21, 1914 | 1,095 00 |
| Stratford | " | Coal per ton—Ant., egg | | A. Johnston & Son | | 6 65 |
| Strathroy | " | " | furn. | R. M. Pincombie | | 7 00 |
| " | " | " | furn. | B. Roke | | 7 00 |
| " | " | " | nut | R. M. Pincombie | | 7 25 |
| " | " | " | nut | B. Roke | | 7 25 |
| St. Marys | " | " | furn. | O'Brien Bros. | | 6 65 |
| " | " | " | nut | O'Brien Bros. | | 6 90 |
| St. Thomas | " | " | egg | Marlatt & Smith | | 6 25 |
| Toronto | Custom house | " | egg | P. Burns & Co | | 7 00 |
| " | " | " | nut | P. Burns & Co | | 7 00 |
| " | " | " | Bit. | Dominion C. & W. Co. | | 4 60 |
| " | " (Front street) | " | Ant., stove | P. Burns & Co | | 7 00 |
| " | " | " | Bit. | Dominion C. & W. Co | | 4 60 |
| " | Examining warehouse | " | Ant., egg | P. Burns & Co | | 7 00 |
| " | " " | " | Bit. | Dominion C. & W. Co | | 4 60 |
| " | Post office | " | Ant., egg | P. Burns & Co | | 7 00 |
| " | " | " | nut | P. Burns & Co | | 7 00 |
| " | " 52 Adelaide | " | egg | P. Burns & Co | | 7 00 |
| " | Postal station "C" | " | egg | Dominion C. & W. Co. | | 6 20 |
| " | " " "D" | " | egg | Dominion C. & W. Co. | | 6 20 |
| " | " " "E" | " | egg | Dominion C. & W. Co. | | 6 20 |
| " | " " "F" | " | nut | Dominion C. & W. Co. | | 6 20 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | Names of Contractors. | Date of Contracts. | Amount. |
|---|---|---|---|---|
| | PUBLIC BUILDINGS.—*Continued.* | | | $ cts. |
| | *Ontario*—Continued. | | | |
| Toronto | Postal Station "K" | Coal per ton—Ant., egg | Dominion C. & W. Co. | 6 20 |
| " | " "K" | " " nut | Dominion C. & W. Co. | 6 20 |
| " | " " (22 Adelaide street) | " " egg | Dominion C. & W. Co | 6 20 |
| " | Postal station (22 Adelaide street) | " Bit. | Dominion C. & W. Co. | 4 60 |
| " | Revenue office | " Ant., egg | Dominion C. & W. Co. | 6 20 |
| " | " " | " " nut | Dominion C. & W. Co. | 6 20 |
| " | " " | " Bit. | Dominion C. & W. Co. | 4 60 |
| " | Post office garage | " Ant., egg | Dominion C. & W. Co. | 6 20 |
| " | " " | " Bit. | Dominion C. & W. Co. | 4 60 |
| " | Immigration hospital | " Ant., egg | Dominion C. & W. Co. | 6 20 |
| " | 59 Victoria street | " " egg | Dominion C. & W. Co. | 6 20 |
| " | 59 " " | " Bit. | Dominion C. & W. Co. | 4 60 |
| " | Public buildings | Supply of electric current for 5 years from April 1, 1914 | Toronto Hydro Electric System. | April 18, 1914 Schedule of prics. |
| " | Postal station "G" | Refitting top floor | Whitehall & Son | Jan. 15, 1914 1,676 00 |
| Trenton | Post office | Fittings | The J. T. Schell Co. | July 24, 1914 1,465 00 |
| " | " | Coal per ton—Ant, nut | B. W. Powers & Son | 7 50 |
| " | " | " " furn. | B. W. Powers & Son | 7 50 |
| Uxbridge | " | " " nut | Jones Hardware Co | 7 75 |
| " | Public building | Clock tower | Geo. Halward sr | July 31, 1914 650 00 |
| Walkerton | Post office | Coal per ton—Ant., egg | Alex. Geo ge | 7 25 |
| Walkerton | Public building | Construction of | Piggott & Healey | July 18, 1914 78,500 00 |
| Waterloo | Post office | Coal per ton—Ant., egg | M. B. Reidal | 7 00 |
| Welland | " | " " furn. | O. W. Rice | 7 00 |
| " | " | Alterations to fittings | T. E. Ryan & J. H. Gardner | Oct. 28, 1914 609 00 |
| Whitby | " | Coal per ton—Ant., egg | E. R. Blow | 6 75 |
| " | " | " " nut | E. R. Blow | 6 95 |
| Wingham | " | " " furn. | J. A. McLean | 6 90 |
| " | " | " " nut | J. A. McLean | 7 15 |
| Woodstock | " | " " egg | A. Hastings & Son | 6 95 |

*Manitoba.*

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|---|---|---|---|---|---|---|
| Brandon | Experimental farm | Coal per ton | Ant., furn. | T. E. Elviss | | 11 25 |
| " | " " | " | Bit. | T. E. Elviss | | 9 25 |
| " | Post office | " | Ant., stove | T. E. Elviss | | 11 25 |
| " | " | " | Bit | T. E. Elviss | | 9 25 |
| " | Immigration building | " | " (Souris) | Barclay & O'Hara | | 4 25 |
| " | " " | " | Ant., stove | T. E. Elviss | | 11 25 |
| Carman | Public building | " | " egg | S. McClain & Son | | 11 50 |
| " | Post office | Fittings | | The Berlin Interior Hardwood Co. Ltd. | Jan. 23, 1915 | 1,244 00 |
| Dauphin | Post office | Coal per ton | Ant., furn | Thos. Jordan | | 11 60 |
| Emerson | " | " | " stove | Chas. Whitman | | 10 50 |
| " | " | " | Bit | Chas. Whitman | | 8 50 |
| " | Immigration building | " | Ant., egg | Chas. Whitman | | 10 50 |
| Minnedosa | Post office | " | " " | A. Iverson | | 11 75 |
| Morden | " | " | " " | Monarch Lumber Co | | 10 80 |
| " | Public building | Fittings | | The J. T. Schell Co. | Aug. 24, 1911 | 1,718 00 |
| Neepawa | Immigration building | Coal per ton | Ant., furn | S. Benson | | 11 55 |
| " | " | " | " stove | S. Benson | | 11 55 |
| Portage la Prairie | Public building | " | " egg | Richardson Bros | | 11 00 |
| " | " | " | Bit | Richardson Bros | | 9 50 |
| " | Armoury building | " | Ant., egg | R. J. Long | | 11 00 |
| Selkirk | Post office | " | " " | Thos. Reid | | 10 90 |
| Souris | " | " | Bit | T. H. Patrick | | 8 15 |
| Stonewall | " | " | Ant., egg | Winnipeg S. & F. Co. | | 11 00 |
| St. Boniface | " | " | " furn | Standard S. & F. Co. | | 10 75 |
| Virden | " | " | " egg | Blackman Bros | | 12 50 |
| Winnipeg | Immigration hall | " | " " | Winnipeg S. & F. Co. | | 10 65 |
| " | " No. 2 | " | " " | Winnipeg S. & F. Co. | | 10 65 |
| " | Immigration hospital | " | " " | Winnipeg S. & F. Co. | | 10 65 |
| " | New post office | " | " " | Winnipeg S. & F. Co. | | 10 65 |
| " | Old " | " | " " | Winnipeg S. & F. Co. | | 10 65 |
| " | New examining warehouse | " | Bit | Standard S. & F. Co. | | 7 40 |
| " | Postal station "B" | " | Ant., egg | Winnipeg S. & F. Co. | | 10 65 |
| " North | Drill hall | Construction of | | The Brown Construction Co., Ltd. | July 15, 1911 | 103,000 00 |

*Saskatchewan.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Battleford | Post office | Coal per ton | Ant., egg | M. B. Mill | | 13 50 |
| " | " | " | Bit. | M. B. Mill | | 6 00 |
| Estevan | " | " | " | H. Johnson | | 2 19 |
| Gravelbourg | Immigration office | " | " | J. M. Beaubien | | 11 00 |
| " | Post office | " | Ant., egg | J. M. Beaubien | | 17 00 |
| " | " | Fittings | | The Western Manufacturing Co., Ltd | May 14, 1914 | 1,000 00 |
| Humboldt | " | Coal per ton | Ant., egg | Bell & Dolan | | 12 50 |
| Indian Head | Experimental farm | Coal per ton | Ant., furn | James Conn | | 11 50 |
| " | " | " | Bit | A. W. Sherwood | | 8 50 |
| " | Forestry station | " | Ant., furn | Jas. Conn | | 11 50 |
| " | " | " | " stove | Jas. Conn | | 11 50 |
| " | " | " | Bit | A W. Sherwood | | 8 50 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| | | | | | $ cts. |
| PUBLIC BUILDINGS. | | | | | |
| *Saskatchewan*—Continued. | | | | | |
| Lloydminster | Immigration hall | Coal per ton—Ant. | James Vincent | | 5 65 |
| " | Post office | " | James Vincent | | 5 65 |
| Maple Creek | " | Ant., furn. | L. C. Parsons | | 14 00 |
| " | " | " | L. C. Parsons | | 11 00 |
| " | " | Bit. | L. C. Parsons | | 7 50 |
| Melfort | " | " | Pembina C. Co. | | 7 75 |
| Moosejaw | " | Ant., egg. | City f. & C. Co. | | 12 60 |
| " | " | Bit. | City I. & C. Co. | | 7 80 |
| " | Immigration building | " | City I. & C. Co. | | 7 80 |
| " | " | Ant. | City I. & C. Co. | | 12 60 |
| " | Post office and Customs | Fittings | Office Speciality Manufacturing Co., Ltd. | Oct. 28, 1914. | 5,481 00 |
| North Battleford | Post office | Coal per ton—Ant., egg. | City Fuel Co | | 12 75 |
| " | " | Bit. | Pembina C. Co. | | 7 25 |
| " | " | Fittings | The Berlin Interior Hardwood Co., Ltd | May 21, 1914. | 1,755 00 |
| " | Customs | " | The J. T. Schell Co. | Oct. 26, 1914. | 1,289 00 |
| Prince Albert | Public building | Coal per ton—Bit | Pembina C. Co. | | 7 75 |
| " | Drill hall | Construction of | Pigott & Healy | June 6, 1914. | 108,460 00 |
| " | " | Screens and changes in heating apparatus, etc., etc. | Pigott & Healy | Oct. 17, 1914. | 5,607 00 |
| " | Public building | Alterations to | Crellin Bros. | Dec. 19, 1914. | 1,925 00 |
| " | " | Carpentry and joinery | W. Worthley | Dec. 19, 1914. | 1,800 00 |
| " | " | Lathing and plastering | Geo. Graham | Dec. 19, 1914. | 600 00 |
| " | " | Electrical work | P. A. Electric | Dec. 19, 1914. | 2,900 00 |
| " | " | Plumbing and heating | Wharton & Co | Dec. 19, 1914. | 640 00 |
| " | " | Painting and kalsomining | F. W. Turner | Dec. 19, 1914. | 950 00 |
| Regina | Post office | Coal per ton—Ant., egg | Whitmore Bros. | | 12 75 |
| " | " | Bit. | Whitmore Bros. | | 8 50 |
| " | Lands office | Ant., egg. | Whitmore Bros. | | 12 75 |
| " | Immigration building | Bit. | Whitmore Bros | | 8 50 |
| Saskatoon | Post office | Ant., egg. | R. J. Armstrong | | 12 75 |
| " | Immigration building | " stove | Pembina C. Co. | | 7 25 |
| Swift Current | Post office | Ant. | Western Coal Co. | | 14 80 |
| Unity | Immigration building | Bit. | Unity Lumber Co. | | 6 50 |
| Wadina | " | " | Wadina L. Co. | | 8 50 |
| Weyburn | Post office | " | United Coal Co. | | 7 25 |

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|---|---|---|---|---|---|---|
| Wilkie | Immigration building | " | " | Simpson Bros | | 10 00 |
| " | " | " | Ant., furn | Simpson Bros | | 13 50 |
| Yorkton | Post office | " | " egg. | Yorkton L. & C. Co. | | 13 00 |
| " | " | " | Bit | Pembina Coal Co. | | 8 25 |

*Alberta.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Athabaska Landing | Immigration office | Coal per ton—Bit. | | City C. & I. Co. | | 5 50 |
| Bassano | Public building | Construction of | | M. C. Sackrider | Aug. 24, 1914 | 23,400 00 |
| Biggar | Immigration office | Coal per ton—Bit | | Pembina Coal Co. | | 7 00 |
| Calgary | " shed | " | " | C. S. Lott | | 7 50 |
| " | " " | " | Ant | C. S. Lott | | 9 25 |
| " | Examining warehouse | " | " egg | C. S. Lott | | 5 75 |
| " | Customs building | Additional marble works | | The J. McDiarmid Co. Ltd | Nov. 18, 1914 | 10,285 00 |
| Castor | Immigration office | Coal per ton—Bit | | A. D. McCormack | | 3 60 |
| Edmonton | " building | " " | " | Western Coals | | 3 90 |
| " | Post office | " " | " | Western Coals | | 3 90 |
| " | Drill hall | Construction of | | P. Lyall & Sons Cons. Co. Ltd | July 11, 1914 | 286,000 00 |
| Edson | Immigration office | Coal per ton—Bit | | Pembina Coal Co | | 5 50 |
| Entwistle | " " | " " | " | Pembina Coal Co. | | 4 50 |
| Kerobert | " " | " " | " | Beaver L. C. | | 9 25 |
| Lethbridge | Post office | " " | " | City Cartage Co | | 4 50 |
| " | Customs | Fittings | | The Berlin Interior Harwood Co. Ltd | Feb. 19, 1915 | 1,280 00 |
| MacLeod | Custom house | Coal per ton—Bit | | R. H. Hilliard | | 6 00 |
| Medicine Hat | Public building | Addition and alterations to | | M. C. Sackrider | Aug. 24, 1914 | 38,266 00 |
| Red Deer | " | Coal per ton—Bit | | A. Clutterbuck | | 4 37½ |
| Strathcona | Immigration building | " " | " | C. Creamer | | 3 95 |
| " | Post office | " " | " | C. Creamer | | 3 95 |
| Vermilion | Public building | " " | " | Pembina Coal Co | | 6 00 |
| Viking | Immigration office | " " | " | L. R. Dayton | | 4 25 |
| Wainwright | " " | " " | " | Pembina Coal Co | | 6 50 |

*British Columbia.*

| | | | | | | |
|---|---|---|---|---|---|---|
| Comox | Post office | Fittings | | Tinney & Humphries Ltd | July 23, 1914 | 935 00 |
| Duncan Station | " | " | | Victoria Show Case Co. | Nov. 24, 1914 | 2,266 00 |
| Greenwood | " etc | " | | The J. T. Schell Co | Nov. 26, 1914 | 1,877 00 |
| Mount Pleasant (Vancouver) | Postal station "C" | Construction of | | T. J. Whiteside & G. E. Williamson | July 30, 1914 | 86,827 30 |
| New Westminster | Post office and customs | Fittings | | The Berlin Office & Fixture Co. Ltd | March 23, 1915 | 4,687 00 |
| North Vancouver | Drill hall | Construction of | | Campbell & Wilkie | April 15, 1914 | 28,415 80 |
| " " | " | Additional concrete walks | | Campbell & Wilkie | July 22, 1914 | 2,369 00 |
| Port Alberni | Public building | Construction of | | Knott & Jones | April 28, 1614 | 30,500 00 |
| " | Post office and customs | Fittings | | Knott & Jones | March 23, 1915 | 1,835 00 |
| Union Bay | Post office | " | | Tinney & Humphries Ltd | July 23, 1914 | 855 00 |
| Vancouver | Immigration and detention hospital | Additional works | | Snyder Bros. & Brethour | Sept. 26, 1914 | 4,382 90 |
| " | Immigration building | Supply and installation of passenger elevator | | Otis Fensom Elevator Co. Ltd | March 24, 1915 | 2,918 00 |
| Victoria | Drill hall | Addition to | | Parfitt Bros. | Aug. 1, 1915 | 39,500 00 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| PUBLIC BUILDINGS.—*Concluded.* | | | | | $ cts. |
| *Alberta.* Continued. | | | | | |
| Victoria | Post office | Alterations and additions to heating and ventilation systems | Hayward & Docks Ltd | Sept. 23, 1914 | 19,200 00 |
| William Head | First-class detention building | Construction of | R. Moncrieff | June 12, 1914 | 32,045 00 |
| HARBOURS AND RIVERS. | | | | | |
| *Nova Scotia.* | | | | | |
| Cheverie | Wharf | Construction of | Mortimer Parsons | June 4, 1914 | 12,809 00 |
| Comeau's Cove | Breakwater | " | Dayton & Condon | April 28, 1914 | 11,890 00 |
| " Hill | " repairs and extension | | J. B. Potier | April 30, 1914 | 3,590 00 |
| Digby | Dredging (gov't pier) | Class "B" p. c. yard | The Maritime Dredging & Cons. Co. Ltd. | June 12, 1914 | 0 24½ |
| East Ferry | Wharf | Construction of | Engineers & Contractors Ltd. | July 7, 1914 | 10,274 00 |
| East River | Lock and dam | Changes in items 1, 2, 3, 4, 5, 6, and 7 | McDougal's Bros. | Nov. 7, 1914 | 3,475 00 |
| Margaree | Dredging | Class "B" p. c. yard | V. T. Bartram | Aug. 26, 1614 | 0 55 |
| *New Brunswick.* | | | | | |
| Bathurst | Dredging | Class "B" p. c. yard | The Northern Dredging & Cons. Co. Ltd. | May 4, 1914 | 0 25 |
| " | " | " " " | The Northern Dredging & Cons. Co. Ltd. | May 19, 1914 | 0 30 |
| " | " | " " " | The Northern Dredging & Cons. Co. Ltd. | Nov. 2, 1914 | 0 30 |
| Cocagne | Wharf | Construction of | H. G. Beresford | May 11, 1914 | 6,880 00 |
| Hatfield's Point | Concrete and timber wharf | | W. R. Fawcett | July 23, 1914 | Sched. of prices. |
| Maquapit Lake | Dredging | Class "B" p. c. yard | The New Brunswick Construction Co. Ltd. | June 5, 1914 | 0 20 |
| Miramichi River | " | " " " | Peter England | July 3, 1914 | 0 37 |
| Richibucto (North & South Beaches) | Breakwaters | Extension to | Engineers & Contractors Ltd. | July 7, 1914 | Sched. of prices. |
| St. George | Dredging | Class "B" p. c. yard | G. S. Gregory | Aug. 1, 1914 | 0 50 |
| " | | | | | |
| St. John West | Wharves | Construction of | The Maritime Dredging & Cons. Co. Ltd. | May 11, 1914 | Sched. of prices. |
| " West | Pier | " | The Maritime Dredging & Cons. Co. Ltd. | May 11, 1914 | " " |
| Harbour | Dredging | Class "B" p. c. yard | The Maritime Dredging & Cons. Co. Ltd. | July 3, 1914 | 0 49½ |

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|---|---|---|---|---|---|---|
| " West | Grain conveyors | Supply of electric power for p. kil. hour | Can. Pac. Ry. Co | Sept. 14, 1913 | | 0 05 |
| " | Foundation work for permanent shed on quays | | The Maritime Dredging & Cons. Co. Ltd | Oct. 26, 1914 | Cost plus 15 p.c. | |
| " West | Temporary wooden freight shed | Construction of | The Maritime Dredging & Cons. Co. Ltd | Oct. 29, 1914 | " | " |
| Woodward's Cove | Breakwater | " | C. A. Huntley | April 15, 1914 | | 11,970 00 |
| | | *Quebec.* | | | | |
| Beauport | Dredging | Class "B" p. c. yard | The W. J. Poupore Co. Ltd | July 3, 1914 | | 0 30 |
| Knowlton Landing | Wharf | Construction of | Loomis, MacBean & Williams | May 18, 1914 | | 7,395 00 |
| Laprairie | Temporary road | " | A. Duranceau & N. Poupart | April 29, 1914 | | 4,000 00 |
| Lauzon | Dry dock | Renewal of boilers | E. Leonard & Sons | Nov. 4, 1914 | | 5,299 00 |
| L'Islet | Wharf | Two triangular blocks | J. B. Gallibois | July 11, 1914 | $1.80 p.c. yard. | |
| Quinze River | Highway bridge | Superstructures and approaches | Lynch, Peckam & Gorman | May 9, 1914 | Sched. of prices. | |
| Quyon | Wharf | Construction of | Thos. & J. Moran | April 16, 1914 | " | " |
| | | *Ontario.* | | | | |
| Armitage Landing | Wharf | Construction of | McCool & Moffat | April 13, 1614 | Sched. of prices. | |
| Bruce Mines | Dredging | Class "B" p. c. yard | The Soo Dredging & Cons. Co Ltd | Nov. 7, 1914 | | 0 15½ |
| Burlington Channel | South pier | Renewal of | The Canadian Engineering & Contracting Co. Ltd | May 7, 1914 | | $12,420 14 |
| " | Revetment wall | Construction of | D. G. Stewart | July 24, 1914 | Sched. of prices. | |
| " Channel | To furnish lighting to two lamp posts (three years from first lighting) p. kilw. hour | | The Hamilton Cataract Power Light & Traction Co. Ltd | | | 0 65 |
| Cataraqui River | Additional works | Construction of | The Thunder Bay Contracting Co. Ltd | Jan. 11, 1915. | | 4,000 00 |
| Cobourg | Centre pier | Reconstruction of | The Randolph Macdonald Co. Ltd | April 6, 1914. | Sched. of prices. | |
| Fort William (Mission River) | Harbour and river improvements | | The Thunder Bay and Contracting Co. Ltd | April 21, 1914. | " | " |
| Fort William (McKellar River) | Dredging | Class "B" p. c. yd. | Great Lakes Dredging Co. Ltd | July 25, 1914. | | 0 23 |
| Fort William | Revetment wall (2,300 feet) | Construction of p. ft. | The Thunder Bay Contracting Co. Ltd. | Dec. 21, 1914. | | 128 37 |
| " | Dredging | Class "B" p.c. yd | Great Lakes Dredging Co. Ltd | Dec. 22, 1914. | | 0 25 |
| Goat Island (Little Current) | " | Class "A" p.c. yd | The Soo Dredging & Cons. Co. Ltd | June 15, 1914. | | 2 90 |
| Goat Island (Little Current) | " | Class "A" p.c. yd | The Soo Dredging & Cons. Co. Ltd | Sept. 11, 1914. | | 2 90 |
| Goderich | " | Class "B" p.c. yd | Jennings & Ross Ltd | June 1, 1914. | | 0 16 |
| " | Breakwater (Southwest) | Extension to | Wm. Bermingham | Oct. 30, 1914. | Sched. of prices. | |
| Little Detroit | Dredging | Class "A" p.c. yd | The C. S. Boone Dred.g. & Cons. Co. Ltd | Nov. 5, 1914. | | 3 00 |
| " " | " | Class "A" p.c. yd | The C. S. Boone Dred'g. & Cons. Co. Ltd | Jan. 11, 1915. | | 3 00 |
| Port Arthur | New breakwater | 2nd extension to | Port Arthur Construction Co. Ltd | April 21, 1914. | Sched. of prices. | |
| Port Burwell | Dredging | Class "B" p.c. yd | The C. S. Boone Dred'g. & Cons. Co. Ltd | July 17, 1914. | | 0 19⅝ |
| Port Hope | Harbour improvements | Construction of | Tompkins & Cunningham | July 7, 1914 | Sched. of prices. | |
| " | Dredging | Class "B" p.c. yd | The Canadian Dredging Co. Ltd | Nov. 9, 1914. | | 0 24 |

No. 1.—Contracts let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | | | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|---|---|
| | | | | | $ cts. |
| Harbours and Rivers—*Continued.* | | | | | |
| *Ontario—Continued.* | | | | | |
| Port Stanley | Concrete warehouse | Construction of | A. E. Ponsford | Feb. 19, 1915. | Sched. of prices. |
| Rainy River | Pile protection works | Construction of | W. J. Sims & R. A. Bingham | June 16, 1914 | " " |
| Washago | Dam across Little Falls and Big Falls channel and deepening Channel of Severn river | | J. O. Roddick | April 11, 1914. | " " |
| Wellington Village | Harbour improvements | Construction of | McFarlane, Pratt & Hanley Ltd. | April 15, 1914. | " " |
| Windsor | Warehouse on dock | Construction of | A. E. Ponsford | April 15, 1914. | 7,931 00 |
| *Manitoba.* | | | | | |
| Selkirk | Government shipyard | Supply of electric power to | The Town of Selkirk | May 23, 1914. | (for 3 yrs) $1.00 p. h.p. per month.) |
| " | Marine railway | Supply of electric energy | The Town of Selkirk | Aug. 31, 1914. | (for 5 years from Mch 15 to Nov. 15, in each of said 5 years, at $1.00 p. h. p. per month.) |
| *British Columbia.* | | | | | |
| Fraser River (North Arm) | Jetty | Construction of and dreging of a channel | Pacific Dredging Co. Ltd. | May 22, 1914. | Sched. of prices. |
| Gleneden | Public wharf | Construction of | James MacDonald & Co. | July 6, 1914. | 5,733 00 |
| Kaslo | Addition of 98 feet to wharf, and removal of old timber and rock crib | | Wm. English | April 17, 1914 | 2,110 00 |
| Nanaimo | Dredging | Class "B" p.c. yd | Pacific Dredging Co. Ltd | June 9, 1914 | 0 23½ |
| Nootka Island | Wharf | Construction of | R. H. Wood | April 24, 1914. | 4,500 00 |
| Pitt River | Additional dredging | Class "B" p.c. yd | Pacific Dredging Co. Ltd | June 20, 1914. | 0 18 |
| Powell River | Dredging | Class "B" p.c. yd | Pacific Dredging Co. Ltd | April 4, 1914. | 0 44 |
| Pritchard | Wharf | Construction of | H. S. Behar et & Sam. Mills | May 26, 1914. | 4,850 00 |
| *Vessels, Dredges, and Plant.* | | | | | |
| Installation of oil burning apparatus and oil fuel tanks in tug *Vitrel* | | | British Columbia Marine Railways Co. Ltd | May 27, 1914. | 4,825 00 |
| Supply of brooms and brushes for departmental dredging plant for Ontario and Quebec for 1914-15 | | | T. S. Simms & Co. Ltd. | June 15, 1914. | Sched. of prices. |
| Supply of chains for departmental dredging plant for Ontario and Quebec for 1914-15 | | | Lewis Bros. Ltd | June 15, 1914. | " " |

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|---|---|---|---|
| Supply of hardware for departmental dredging plant for Ontario and Quebec for 1914-15 | Frothingham & Workman Ltd. | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for Ontario and Quebec for 1914-15 | Canadian Fire Hose Co. | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for Ontario and Quebec for 1914-15 | The Builders Supply Co | June 15, 1914. | " " |
| Supply of oils and greases for departmental dredging plant for Ontario and Quebec for 1914-15 | W. F. Kelly Oil Co. | June 15, 1914 | " " |
| Supply of packing for departmental dredging plant for Ontario and Quebec for 1914-15 | Canadian Consolidated Rub'er Co. Ltd. | June 15, 1914. | " " |
| Supply of paints and paint oils for departmental dredging plant for Ontario and Quebec for 1914-15 | The Ottawa Paint Works | June 15, 1914. | " " |
| Supply of manila rope for departmental dredging plant for Ontario and Quebec for 1914-15 | Consumers Cordage Co. Ltd. | June 15, 1914 | " " |
| Supply of wire rope for departmental dredging plant for Ontario and Quebec for 1914-15 | Drummond McColl & Co. Ltd. | June 15, 1914. | " " |
| Supply of steam-pipe valves for departmental dredging plant for Ontario and Quebec for 1914-15 | Empire Manufacturing Co. Ltd. | June 15, 1914. | " " |
| Supply of steam-pipe valves for departmental dredging plant for Ontario and Quebec for 1914-15 | Samuel Fisher | June 15, 1914. | " " |
| Supply of brooms and brushes for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | T. S. Simms & Co. Ltd. | June 15, 1914. | " " |
| Supply of chains for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | S. Norman Sancton | June 15, 1914. | " " |
| Supply of hardware for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | Frothingham & Workman Ltd | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | Estey & Co | June 15, 1914. | " " |
| Supply of oils and greases for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | The British American Oil Co. Ltd. | June 15, 1914. | " " |
| Supply of packing for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | Canadian Consolidated Rubber Co. Ltd | June 15, 1914. | " " |
| Supply of paints and paint oils for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | R. C. Jamieson & Co. Ltd. | June 15, 1914 | " " |
| Supply of manila rope for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | Consumers Cordage Co. Ltd | June 15, 1914. | " " |
| Supply of wire rope for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | The Gen'l Supply Co. of Canada Ltd. | June 15, 1914. | " " |
| Supply of steam-pipes, valves and fittings for departmental dredging plant for New Brunswick and Nova Scotia for 1914-15 | The Canadian Fairbanks Morse Co. Ltd. | June 15, 1914. | " " |
| Supply of brooms and brushes for departmental dredging plant for Prince Edward Island for 1914-15 | Poole & Thompson Ltd. | June 15, 1914. | " " |
| Supply of chains for departmental dredging plant for Prince Edward Island for 1914-15 | W. H. Thorn & Co. Ltd. | June 15, 1914. | " " |
| Supply of hardware for departmental dredging plant for Prince Edward Island for 1914-15 | Poole & Thompson Ltd. | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for Prince Edward Island for 1914-15 | J. T. Polly | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for Prince Edward Island for 1914-15 | The Gen'l Supply Co. of Canada Ltd. | June 15, 1914. | " " |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|
| | | | $ cts. |
| *Vessels, Dredges and Plant*—Continued. | | | |
| Supply of oils and greases for departmental dredging plant for Prince Edward Island for 1914-15 | The British American Oil Co. Ltd | June 15, 1914. | Sched of prices. |
| Supply of packing for departmental dredging plant for Prince Edward Island for 1914-15 | Canadian Consolidated Rubber Co. Ltd | June 15, 1914. | " " |
| Supply of paints and paint oils for departmental dredging plant for Prince Edward Island for 1914-15 | R. C. Jamieson & Co. Ltd. | June 15, 1914. | " " |
| Supply of manila rope for departmental dredging plant for Prince Edward Island for 1914-15 | Consumers Cordage Co. Ltd | June 15, 1914. | " " |
| Supply of wire rope for departmental dredging plant for Prince Edward Island for 1914-15 | Poole & Thompson Ltd | June 15, 1914. | " " |
| Supply of steam pipes, valves and fittings for departmental dredging plant for Prince Edward Island for 1914-15 | The Canadian Fairbanks Morse Co. Ltd | June 15, 1914. | " " |
| Supply of ship chandlery for departmental dredging plant for New Westminster, B.C., for 1914-15 | J. T. Trapp & Co. Ltd | June 15, 1914. | " " |
| Supply of hardware, valves for departmental dredging plant for New Westminster, B.C., for 1914-15 | J. T. Trapp & Co. Ltd | June 15, 1914. | " " |
| Supply of fittings, packing for departmental dredging plant for New Westminster, B.C., for 1914-15 | J. T. Trapp & Co. Ltd | June 15, 1914. | " " |
| Supply of wire rope for departmental dredging plant for New Westminster, B.C., for 1914-15 | J. T. Trapp & Co. Ltd | June 15, 1914. | " " |
| Supply of manila rope and hose for departmental dredging plant for New Westminster, B.C., for 1914-15 | J. T. Trapp & Co. Ltd | June 15, 1914. | " " |
| Supply of groceries for departmental dredging plant for New Westminster, B.C., for 1914-15 | C. A. Welsh & Co. Ltd | June 15, 1914. | " " |
| Supply of meats for departmental dredging plant for New Westminster, B.C., for 1914-15 | Vancouver & Prince Rupert Meat Co. Ltd | June 15, 1914. | " " |
| Supply of fresh vegetables for departmental dredging plant for New Westminster, B.C., for 1914-15 | Annondale Supply Co. Ltd | June 15, 1914. | " " |
| Supply of fresh fish for departmental dredging plant for New Westminster, B.C., for 1914-15 | P. Burns & Co. Ltd | June 15, 1914. | " " |
| Supply of ship chandlery, packing, wire rope, manila rope, and hose for departmental dredging plant for Vancouver, B.C., for 1914-15 | McLennan McFeeley Co. Ltd. | June 15, 1914. | " " |
| Supply of hardware for departmental dredging plant for Vancouver, B.C., for 1914-15. | Wood Valance & Leggatt, Ltd | June 15, 1914. | " " |
| Supply of valves, fittings, packing, wire rope, manila rope for departmental dredging plant for Vancouver, B.C., for 1914-15 | Simpson, "Balkwill" & Co., Ltd | June 15, 1914. | " " |
| Supply of hose for departmental dredging plant for Vancouver, B.C., for 1914-15 | Canadian Consolidated Co., Ltd | June 15, 1914. | " " |

| | | | | |
|---|---|---|---|---|
| Supply of groceries and fresh vegetables for departmental dredging plant for Vancouver, B.C., for 1914-15 | London Grocery Co., Ltd | June 15, 1914.. | Sched. of prices. | |
| Supply of meats for departmental dredging plant for Vancouver, B.C., for 1914-15 | P. Burns & Co., Ltd | June 15, 1914.. | " | " |
| Supply of fresh fish for departmental dredging plant for Vancouver, B.C., for 1914-15 | Kamloops, Vancouver, Meat Co., Ltd | June 15, 1914.. | " | " |
| Supply of steel castings for departmental dredging plant for Vancouver, B.C., for 1914-15 | Vancouver Engineering Works, Ltd | June 15, 1914.. | " | " |
| Supply of ship chandlery, packing, wire rope, manila rope, and hose for departmental dredging plant for Vancouver, B.C., for 1914-15 | P. McQuade & Son | June 15, 1914.. | " | " |
| Supply of hardware for departmental dredging plant for Victoria, B.C., for 1914-15 | The Hickman Tye Hardware Co., Ltd | June 15, 1914.. | " | " |
| Supply of valves and fittings for departmental dredging plant for Victoria, B.C., for 1914-15 | Walter S. Fraser & Co., Ltd | June 15, 1914.. | " | " |
| Supply of groceries for departmental dredging plant for Victoria, B.C., for 1914-15 | H. O. Kirkman & Co., Ltd | June 15, 1914.. | " | " |
| Supply of meats for departmental dredging plant for Victoria, B.C., for 1914-15 | P. Burns & Co., Ltd | June 15, 1914.. | " | " |
| Supply of fresh vegetables and fresh fish for departmental dredging plant for Victoria, B.C., for 1914-15 | D. K. Chungranes | June 15, 1914.. | " | " |
| Supply of coal for departmental dredging plant for Victoria, B.C., for 1914-15 | Kirk & Co | June 15, 1914.. | " | " |
| Supply of 300 tons of best quality steam coal for departmental dredges and tugs for Charlottetown, P.E.I., for 1914-15, per ton | Buntain, Bell & Co | June 16, 1914.. | 4 | 50 |
| Supply of 1100 tons of coal for departmental dredging plant for Lockeport, N.S., for 1914-15, per ton | Southern Salvage Co., Ltd | June 20, 1914.. | 5 | 50 |
| Supply of 1500 tons of coal for departmental dredging plant for New Glasgow, N.S., for 1914-15, per ton | Gannon & Weir | June 20, 1914.. | 4 | 35 |
| Supply of 500 tons of coal for departmental dredging plant for Oromocto, N.B., for 1914-15, per ton | J. D. Mitchell | June 20, 1914.. | 6 | 50 |
| Supply of 600 tons of coal for departmental dredging plant for Buctouche, N.B., for 1914-15, per ton | Felix Michaud | June 20, 1914.. | 5 | 20 |
| Supply of 900 tons of coal for departmental dredging plant for Campbellton, N.B., for 1914-15, per ton | R. K. Shives | June 20, 1914.. | 5 | 70 |
| Supply of 500 tons of coal for departmental dredging plant for Bathurst, N.B., for 1914-15, per ton | Bathurst Lumber Co | June 20, 1914.. | 6 | 00 |
| Supply of 2000 tons of coal for departmental dredging plant for St. John, N.B., for 1914-15, per ton | Dominion Coal Co | June 20, 1914. | 4 | 25 |
| Supply of 600 tons of coal for departmental dredging plant for Victoria Island ship yard, Ottawa, Ont., for 1914-15, per ton | Ottawa Transportation Co., Ltd | July 11, 1914.. | 4 | 25 |
| Supply of 37 knots of submarine cable for Halifax, N.S., and Vancouver, B.C | Siemens Co. of Canada, Ltd | Sept. 18, 1914.. | 20,210 | 00 |
| Supply of 1600 tons of coal for departmental dredging plant for Montreal, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914 | 3 | 40 |
| Supply of 300 tons of coal for departmental dredging plant for Montreal, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914 | 3 | 80 |
| Supply of 500 tons of coal for departmental dredging plant for Three Rivers, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914 | 4 | 02 |
| Supply of 300 tons of coal for departmental dredging plant for Quebec, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914. | 4 | 45 |
| Supply of 300 tons of coal for departmental dredging plant for Quebec, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914. | 4 | 98 |
| Supply of 300 tons of coal for departmental dredging plant for Rimouski, Que., for 1914-15, per ton | Canadian Import Co | Sept. 22, 1914 | 5 | 60 |
| Supply of 100 tons of coal for departmental dredging plant for St. Johns, Que., for 1914-15, per ton | James Sowards Coal Co | Sept. 23, 1914. | 4 | 40 |

No. 1.—CONTRACTS let by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Works. | Names of Contractors. | Date of Contract. | Amount. |
|---|---|---|---|
| | | | $ cts. |
| *Vessels, Dredges and Plant.* Continued. | | | |
| Supply of 200 tons of coal for departmental dredging plant for Cache Bay, Ont., for 1914-15, per ton | F. P. Weaver Coal Co., Ltd | Sept. 23, 1914 | 5 18 |
| Supply of 300 tons of coal for departmental dredging plant for Haileybury, Ont., for 1914-15, per ton | F. P. Weaver Coal Co., Ltd | Sept. 23, 1914 | 5 48 |
| Supply of 500 tons of coal for departmental dredging plant for Collingwood, Ont., for 1914-15, per ton | F. P. Weaver Coal Co., Ltd | Sept. 23, 1914 | 3 93 |
| Supply of 1000 tons of coal for departmental dredging plant for Hamilton, Ont., for 1914-15, per ton | F. P. Weaver Coal Co., Ltd | Sept. 23, 1914 | 3 68 |
| Supply of 400 tons of coal for departmental dredging plant for Port Burwell, Ont., for 1914-15, per ton | F. P. Weaver Coal Co., Ltd | Sept. 23, 1914 | 3 43 |
| Supply of 25 tons of coal for departmental dredging plant for Hamilton, Ont., for 1914-15, per ton | Citizens Fuel & Ice Co., Ltd | Sept. 23, 1914 | 6 50 |
| Supply of 50 tons of coal for departmental dredging plant for Victoria Island shipyard, Ottawa, Ont., for 1914-15, per ton | Barrett Bros | Sept. 25, 1914 | 7 00 |
| Supply of 100 tons of coal for departmental dredging plant for Chambly, Que., for 1914-15, per ton | Geo. Hall Coal Co. of Canada, Ltd | Sept. 28, 1914 | 1 75 |
| Supply of 40 tons of coal for departmental dredging plant for Montreal, Que., for 1914-15, per ton | Geo. Hall Coal Co. of Canada, Ltd | Sept. 28, 1914 | 7 25 |
| Supply of 300 tons of coal for departmental dredging plant for Buckingham, Que., for 1914-15, per ton | John Heney & Son, Ltd | Sept. 29, 1914 | 1 75 |
| Supply of 300 tons of coal for departmental dredging plant for Quyon, Que., for 1914-15, per ton | John Heney & Son Ltd | Sept. 29, 1914 | 4 90 |
| Supply of 5 tons of coal for departmental dredging plant for Victoria Island shipyard Ottawa, Ont., for 1914-15, per ton | Independent Coal Co., Ltd | Oct. 22, 1914 | 5 00 |
| Renewals and repairs to s.s. *Turian* | Halifax Marine Engineering Co., Ltd | Dec. 8, 1914 | 25,950 00 |
| Renewals and alterations to steel work to s.s. *Turian* | T. Hogan & Co | Dec. 8, 1914 | 9,841 00 |
| Renewal of boiler on dredge "P. Wks. Dept. No. 3. Restigouche" | The Sydney Foundry and Machine Works, Ltd. | Feb. 8, 1915 | 9,980 00 |
| *Government Telegraph Service.* | | | |
| Supply and delivery of telegraph wire at Montreal, Que., and Vancouver, B.C | The Steel Company of Canada | Oct. 13, 1914 | 15,845 05 |

# STATEMENT No. 2

# PROPERTIES PURCHASED OR SOLD

No 2.—STATEMENT of properties purchased or sold by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915.

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what Purpose. | Area | Price. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | $ cts. |
| April 1 | Andrew Westberg | His Majesty | Sale of part of north half of the south half of lot No. 10, 1st con., tp. of Casey, Ont. | Lake Temiskaming reservoir dam | 2 acres | 80 00 |
| " 1 | C. M. Myers, *et al* | " | Sale of lots Nos. 1 and 2, south side of Cole Harbour, N.S. | Site for wharf | 2·1 acres | 205 00 |
| " 3 | Certificate of Title | | Sale of lots Nos. 1 to 6, inclusive, and 8 to 11, inclusive, block 2, Selkirk, Man. | Government shipyard | | |
| " 7 | Notice of Expropriation | | Expropriated land and premises "Carslake hotel," St. James st., Montreal, Que. | Postal station "A" | | |
| " 7 | H. H. Bradburn & J. T. Webb | His Majesty | Sale of part of lot No. 7, con. E, Island No. 1, Fort William, Ont. | McKellar river improvements | .06 acres | 58 00 |
| " 7 | Joseph Davis | " | Sale of parts of lots Nos. 25, 26 and 31, east side of Main st., Exeter, Ont. | Site for public building | | 3,000 00 |
| " 8 | His Majesty | Samuel Code | Sale of lots Nos. 11 and 12, block 1, Dauphin, Man. | Private enterprise | | 3,500 00 |
| " 9 | H. Price & L. J. Camsusa | His Majesty | Bill of sale of str. *Gunhild* | Private enterprise | | 12 000 00 |
| " 9 | Arcade Olivier | " | Release and discharge of mortgage *re* property at Grand' Mère, Que. | Site for public building | | 5,400 00 |
| " 9 | Foley, Welch & Stewart | " | Quit claim deed *re* telephone line from Skeena Crossing to New Hazelton, B.C. | Telephone line | | 1 00 |
| " 15 | Province of New Brunswick | " | Conveyance of site known as "Bedford Wharf," Bedford, N.S. | Site for wharf | | Free transfer. |
| " 15 | Certificate of Title | | Sale of lots Nos. 18, 19 and 20, block 30, Calgary, Alta. | Site for public building | | |
| " 15 | Peter Hamilton Co., Ltd. | His Majesty | Sale of southerly part of lot No. 1, east of George st., and north of Sherbrooke, and southerly part of block "A," Peterborough, Ont. | Site for public building | | 18,000 00 |
| " 15 | His Majesty | C. C. Delbridge | Sale of building on Drill Hall site, except small office and houses Nos. 1620 and 1614, William st., Vancouver, B.C. | Private enterprise | | 1,850 00 |
| " 15 | W. V. Cragg | His Majesty | Sale of part of south half of lot No. 1, con. 1, tp. of Harris, Ont. | Lake Temiskaming reservoir dam | ·9 acres | 587 50 |
| " 17 | Provincial Government of British Columbia | Dominion Gov't. | Transfer of lots Nos. 1, 2 and 3, block 103, subdivision of No. 882, group 1, Cassiar district, B.C. | Site for post office | | Free transfer. |

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|---|---|---|---|---|---|---|---|
| " | 18 | C. N. James & A. James | His Majesty | Sale of lots No. 1 and 2, block 1, subdivision C district, lot No. 613, South Vancouver, B.C. | Site for postal station "D" | | 10,500 00 |
| " | 18 | Mary Jeanne St. Laurent | " | Sale of part of lots Nos. 38 and 39, St. Ours, Que | Site for public building | 100ft. x 43·4ft | 1 200 00 |
| " | 20 | H. S. Adams | " | Sale of part of lot No 12, con. 8, Markham, Ont | Site for public building | | 1,200 00 |
| " | 23 | Municipal Council of Village of Portsmouth | " | Sale of parcel of land in front of lot No. 12, southeasterly side of Main st., Portsmouth, Ont | Site for wharf | 2¾ acres | 1 00 |
| " | 23 | Certificate of Title | | Sale of lots Nos. 183 and 186, block 2, Edmonton, Alta | Site for customs warehouse | | |
| " | 23 | Certificate of Ownership | | Sale of land at Rousselet island, tp. of Harris, Ont | Lake Temiskaming reservoir dam | 301 acres | 2,000 00 |
| " | 27 | Mary Murat | His Majesty | Sale of part of village lots Nos. 31 and 32, tp. of Garrick, Mildmay, Ont | Site for post office | | 1,300 00 |
| " | 28 | J. M. Mason | " | Sale of south half of lot No. 1, con I.R.I., tp. of Harris, Ont | Lake Temiskaming reservoir dam | 3·5 acres | 1 00 |
| " | 29 | John Morgan | " | Sale of lot No. 11, east side of Graham st., West Lorne, Ont | Site for public building | | 1,000 00 |
| " | 29 | Canadian Realty Corporation, Limited, *et al* | " | Sale of most westerly 25 feet of lots Nos. 21, 22 and 23, block 59, Brandon, Man | Site for public building | | 40,000 00 |
| May | 4 | Certificate of Title | | Sale of parts of lots 1415-1416, east side of Armstrong st., tp. of Dymond, Ont | Lake Timiskaming reservoir dam | | 325 00 |
| " | 4 | E. S. Busby | His Majesty | Sale of part of lot No. 5, High st., Southampton, Ont | Site for public building | | 975 00 |
| " | 5 | Notice of Expropriation | | Expropriation of lot No. 24, northwest corner of Main and John streets, Hamilton, Ont. | " " | | |
| " | 7 | W. D. Morris | His Majesty | Sale of west part of east half of lot No. 21, Kent st., Ottawa, Ont | Site for new departmental buildings | | 1,000 00 |
| " | 7 | His Majesty | Mary J. McLeod | Grant of portion of lot No. 24, Lesser Slave Lake Settlement, Grouard, Alberta | Private enterprise | | 450 00 |
| " | 7 | Scottish Canadian Canning Company, Ltd. | His Majesty | Quit claim for right-of-way through leased property, Steveston, B.C | Government training pier | | 2,133 60 |
| " | 8 | Certificate of Title | | Sale of lots Nos. 128, 129, and 132, Courtenay townsite, B.C | | | |
| " | 8 | " " | | Sale of southwest quarter sec. 27, tp. 22, R. 11, west of 6th meridian, Scotch Creek, B.C. | Site for wharf | ·05 acre | 1 00 |
| " | 8 | Simon Salmon, *et al* | His Majesty | Sale of part of reserve, southwesterly side of Walbe creek, New Liskeard, Ont | Lake Timiskaming reservoir dam | ·1 acre | 200 00 |
| " | 11 | J. W. Lepailleur | " | Sale of parts of lots Nos. 235 and 204a, Lachine, Que | Site for wharf | 8128 ft. | 14,600 00 |
| " | 13 | W. S. Whitman, *et ux* | " | Sale of land, William st., Hantsport, N.S. | " public building | 100 ft. x 93·9 ft. | 1,000 00 |
| " | 13 | M. P. Harrington | " | Sale of land at Vogler's Cove, N.S. | For boat landing | ·17 acres | 250 00 |
| " | 16 | Certificate of Title | " | Sale of lots Nos. 1, 2, and 3, block 103, sec. 2, New Hazelton, B.C | Site for post office | | |
| " | 16 | Delise Lemay | " | Sale of lots Nos. 21a and 13a, Leclercville, Que | " Ste. Emilie wharf | 22,221 ft. (eng. m.) | 300 00 |
| " | 16 | Corporation of Leclercville | " | Transfer of lot No. 110, Leclercville, Que | " " " | 1,675 ft | Free transfer. |

No. 2—STATEMENT of properties purchased or sold by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915.—*Contin ed.*

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what purpose. | Area. | Price. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | $ cts. |
| May 20 | W. H. Hamilton, *et ux* | Dominion Gov't. | Sale of water lot and land covered by water in front of lots Nos. 6, 7, 8, and 9, con. D, at Fort William, Ont | Kaministiquia and Mission River improvements | 2 429 acres | 1,376 00 |
| " 20 | W. H. Hamilton, *et ux* | " " | Sale of part of lot No. 9, con. D, Island No. 2, Fort William, Ont | " " " | 95 acres | 11,971 19 |
| " 21 | His Majesty | Foley Bros, Welch-Stewart & Fauquier | Bill of sale of hull of dredge *Geo. McKenzie* | Private enterprise | | 1,800 00 |
| " 21 | Frs. Flety | His Majesty | Sale of lot No. 24, block 16, subdivision of lot No. 196, group I, Vancouver, B.C. | Postal station "B" | | 35,000 00 |
| " 21 | Provincial Government of New Brunswick | Dominion Gov. | Transfer of wharf and all rights, titles, etc, Tabusentac, N.B. | Government purposes | | Free transfer |
| " 27 | J. R. Hood | His Majesty | Sale of lot No. 35, block 15, Oak Lake, Man. | Site for public building | 125 ft. x 25 ft. | |
| " 27 | Edward E. Armstrong, *et ux* | " | Sale of land, wharf property, and privileges at Windsor, N.S. | " wharf | | 7,500 00 |
| " 29 | Certificate of Title | | Sale of lots No. 10 and 11, block 4, Golden, B.C | " public building | | 3,500 00 |
| " 29 | Richelieu & Ontario Navigation Co | His Majesty | Sale of land wharf, being No. 17, III, and 18, at Varennes, Que. | " wharf | | 4,000 00 |
| " 29 | Canadian Copper Co. | " | Sale of part of lot No. 12, con. 2, Copper Cliff, Ont. | " public building | | 1 00 |
| " 30 | T. B. Adams, *et ux* | " | Sale of land at Brighton, N.S. | " boat landing | 6 acre | 200 00 |
| " 30 | F. W. Enright | " | Sale of part of lot No. 7, Halifax, N.S. | " postal station | | 800 00 |
| " 30 | Certificate of Title | | Sale of land in block C, Moosejaw, Sask. | " drill hall | | |
| June 1 | E. C. Hillman | His Majesty | Sale of lot No. 32, north side of Wellington st., Ottawa, Ont. | " new departmental buildings | | 21,672 00 |
| " 4 | C. E. Harris, *et ux* | " | Sale of land at East Ferry, N.S. | Site for wharf | 37 acre | 100 00 |
| " 5 | Michael Gondour, *et al.* | " | Sale of lot No. 18, north side of Broad st., Dunnville, Ont | " public building | | 7,250 00 |
| " 13 | Certificate of Title | | Sale of lots Nos. 7, 8, 9, and 10, block 5, parish of St. James, Man | Site for drill hall | | |
| " 13 | " " | | Sale of lots Nos. 1, 2, 3, and 4, block 5, parish of St. James, Man. | " " | | |
| 15 | " " | | Sale of northerly 90 feet of lot No. 1, block 10, Boissevain, Man. | Site for public building | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " | 16 | Patrick Judge | His Majesty | Release and discharge *re* east half of lot No. 9 and west half of lot No. 10, con. 2, tp. of Casey, Ont. | Lake Temiskaming reservoir dam | | 468 00 |
| " | 16 | " | " | Release and discharge *re* part of east half of lot No 9, con. 2, tp. of Casey, Ont. | Lake Temiskaming reservoir dam | | 1 00 |
| " | 16 | " | " | Release and discharge *re* part of south half of lot No. 9, con. 3, tp. of Casey, Ont. | Lake Temiskaming reservoir dam | | 128 00 |
| " | 16 | Joseph Fraser | " | Sale of land southwest side of Caribou Island, Nova Scotia | Approach to causeway | 4/5 acre | 100 00 |
| " | 17 | Certificate of Title | | Sale of lots Nos. 192 and 193, parish of St. James, Man. | Site for drill hall | | |
| " | 17 | E. Dionne & H. Chouinard | His Majesty | Release for all claims for damages at river St. Mathieu (St. Simon), Que | | | 415 00 |
| " | 17 | I. W. Cleveland, *et al* | " | Sale of land at West Dover, N.S. | Site for breakwater | 24 acres | 150 00 |
| " | 18 | Certificate of Title | | Sale of lot No. 5, block 5, parish of St. James, Man | Site for drill hall | | |
| " | 18 | Provincial Government of Prince Edward Island | Dominion Gov't. | Transfer of lot No. 16, and buildings thereon, at Grande River (South), P.E.I | For south ferry wharf | 120 ft. × 1100 ft | 1 00 |
| " | 19 | Certificate of Title | | Sale of lot No. 6, block 5, parish of St. James, Man. | Site for drill hall | | |
| " | 19 | Notice of Expropriation | | Expropriated land at Grenville, Que. | For interprovincial bridge | 19620 ft. | |
| " | 20 | Certificate of Title | | Sale of lot No. 11, block 5, parish of St. James, Man | Site for drill hall | | |
| " | 22 | Provincial Government of Prince Edward Island | Dominion Gov't. | Transfer of land at McArthur's wharf, McArthur's Landing, P.E.I. | Government purposes | | 1 00 |
| " | 25 | Corporation of the Town of Almonte | His Majesty | Sale of part of Little Bridge St., Almonte, Ont | Addition to post office | 436 sq. ft. | 1 00 |
| " | 25 | Certificate of Title | | Sale of lots Nos. 12 and 35, parish of St. John, Man. | Site for immigration hall | | |
| " | 26 | Province of Prince Edward Island | Dominion Gov't. | Transfer of Aberdeen wharf, Cascumpeque, harbour, P.E.I. | Government purposes | | 1 00 |
| " | 27 | J. Tremblay & A. Gagnon | His Majesty | Sale of part of lot "F," con. 4, Chicoutimi, Que | For Caribou River wharf | 6250 ft. | 25 00 |
| " | 27 | L. P. Sirois, *et al* | " | Sale of lot No. 514, parish of St. Roch, Que. | St. Charles River improvements | | 125,366 10 plus int. 9,141 27 |
| " | 29 | A. J. Bender | " | Sale of part of lots Nos. 1, 94, 2, and 232, also, stone wall at Montmagny, Que. | Site for public building | | 2,000 00 |
| " | 30 | F. J. Smith, *et ux* | " | Sale of land on Mill and front streets, Campbellford, Ont | " " | 19 acres | 3,700 00 |
| " | 30 | Province of British Columbia | Dominion Gov't. | Transfer of land at Salmon Arm, B.C | Wharf approach | 22 acres | Free transfer. |
| July | 3 | His Majesty | Marsh-Hutton-Powers Co. | Sale of old hull of snag boat *Samson* | Private enterprise | | 625 00 |
| " | 3 | " | J. M. Balderson | Sale of old buildings on site at Perth, Ont | " " | | 200 00 |
| " | 4 | Margaraet Conant | His Majesty | Sale of part of lots Nos. 5 and 6. East Whitby, Ont. | Harbour improvements | 58.82 acres | 3,529 20 |
| " | 6 | F. E. Bunnell, *et al* | " | Sale of easterly half of westerly half of lot No. 2, north side of Wellington st., Ottawa, Ont., with right of way | Site for new departmental buildings | | 20,000 00 |

No. 2.—STATEMENT of properties purchased or sold by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915.—*Continued.*

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what purpose. | Area. | Price. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | $ cts. |
| July 10 | Certificate of Title | His Majesty | Sale of lot No. 10, east side of May st., New Liskeard, Ont. | Lake Timiskaming reservoir dam | | 150 00 |
| " 10 | " " | | Sale of lot No. 12, east side of May st., New Liskeard, Ont | Lake Timiskaming reservoir dam | | 150 00 |
| " 11 | His Majesty | James Irwin | Sale and removal of buildings on site at Campbellford, Ont. | Private enterprise | | 250 00 |
| " 15 | " | City of Winnipeg | Grant of river lot No. 57, Winnipeg, Man. | " " | ½ acre | Free grant. |
| " 16 | Notice of Expropriation | | Expropriation of part of lot No. 2238, Quebec, Que. | Extension to post office | 106·3 ft. | |
| " 16 | " " | | Expropriation of part of lot No. 2237, Quebec, Que. | " " | 95 ft. | |
| " 16 | " " | | Expropriation of lot No. 2240, Quebec, Que., | Extension to post office | | |
| " 17 | W. M. Johnston | His Majesty | Sale of part of west half of lot No. 5, 5th con., tp. of Harris, Ont. | Lake Timiskaming reservoir dam | 141·5 acres | |
| " 21 | Certificate of Title | | Sale of part of river lot No. 98, St. Andrews, Man | St. Andrews Rapids improvements | | |
| " 22 | T. J. Seaton, *et ux.* | His Majesty | Sale of westerly part of lot No. 6, north side of Wellington st., Ottawa, Ont. | Site for new departmental buildings | | 36,000 00 |
| " 22 | R. F. Matheson | " | Sale of part of lot No. 14, west side of Kent st., Ottawa, Ont. | Site for new departmental buildings | | 7,920 00 |
| " 27 | H. A. Cain & C. I. Cain | " | Sale of Hatfield's Point wharf (Springfield), N. B | For wharf | 1,422 ft. | 100 00 |
| " 27 | C. R. Gordon | " | Bill of sale of gasolene twin-screw *Wolrondo.* | Government purposes | | 12,000 00 |
| " 30 | Mary Goodall, *et al.* | " | Sale of part of lot No. 6, north side of Wellington st., Ottawa, Ont. | Site for new departmental buildings | | 43,752 00 |
| " 30 | E. M. Goodall & E. L. Goodall | " | Release for disturbance caused to business at Ottawa, Ont. | | | 3,248 00 |
| " 31 | M. E. Cliff, *et vir* | " | Sale of part of lot No. 10, 3rd con., Hespeler, Ont. | Site for public buildings | | 2,200 00 |
| Aug. 1 | J. M. Bourque | " | Sale of land at Eelbrooke, N. S | Site for wharf | 135 sq. ft. | 1 00 |
| " 1 | L. A. Bourque, *et al.* | " | Sale of land and water lot at Eelbrooke, N.S. | " | 36 acres | 100 00 |
| " 3 | British Columbia Marine Railways Co., Ltd | " | Sale of water lot at Langcove, Esquimalt district, B.C. | Esquimalt dry dock | | 1 00 |
| " 4 | J. Verrault | " | Release *in re* lots Nos. 4, 5, and 6, township of Duhamel, Ville Marie, Que. | Lake Timiskaming reservoir dam | | 377 50 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " | 5 | Noe Brouillard | " | Release *in re* lots Nos. 463, 464, 473, 474, 476, and 477, tp. of Duhamel, Ville Marie, Que. | Lake Timiskaming reservoir dam | | 383 00 |
| " | 7 | M. A. Maunders | " | Sale of part of lot No. 15 with right of way, Brussels, Ont. | Site for public building | | 400 00 |
| " | 10 | G. A. Graham | " | Sale of part of westerly half of lot No. 16, con. "K" island No. 1, Fort William, Ont. also water lot. | Kaministiquita and Mission river improvements. | 1·35 acre. .4 acre | 1,900 00 |
| " | 12 | British Columbia Marine Railways Co., Ltd | " | Sale of lots Nos. 53 and 57 to 71, inclusive, sec. 26, Esquimalt, district, B.C. | Esquimalt dry dock | | |
| " | 12 | Certificate of Title | | Sale of lot No. 50, Esquimalt, district, B.C. | | | |
| " | 12 | " " | | Sale of lots Nos. 11 to 16, inclusive, of suburban lot No. 44, Esquimalt district, B.C. | " " | | |
| " | 12 | " " | | Sale of lot No. 40 of suburban lot No. 44, Esquimalt district, B.C. | " " | | |
| " | 12 | " " | | Sale of lots Nos. 1, 2, 3, 4, 5, and 6 subdivision of suburban lots Nos. 37 and 45, Esquimalt district, B.C. | " " | | |
| " | 12 | " " | | Sale of suburban lots Nos. 46 and 52, Esquimalt district, B.C | " " | | |
| " | 12 | J. McEachren, *et al.* | His Majesty | Sale of land between public road at Elmira river (Grand Mira), N.S. | Site for wharf | 750 sq. ft. | 25 00 |
| " | 12 | J. A. Seely, *et ux* | " | Sale of a piece of land at Seely's Cove, N.B. | " | 540 ft. × 29 ft. | 25 00 |
| " | 12 | H. W. Farrow | " | Sale of part of Lot No. 14, Brussels, Ont. | Site for public building | | 2,000 00 |
| " | 12 | M. A. Sinclair | " | Sale of part of lot No. 30, north side of Wellington st., Ottawa, Ont. | Site for new departmental buildings | | 44,844 00 |
| " | 13 | W. Cleave | " | Sale of part of lot No. 31, north side of Victoria st., Ottawa, Ont. | Site for new departmental buildings | | 10,407 98 |
| " | 14 | H. Lagueux | " | Sale of part of lot No. 307, St. Romauld, Que. | Site for postal station | 100 ft. × 110 ft. | 6,000 00 |
| " | 14 | Dominion Government | Provincial Gov't. of Saskatchewan | Transfer of Land Title Office and Registrar's residence at Battleford, Sask.; of court house at Moosomin, Sask; of jail property at Prince Albert, Sask; of Government office, court house, jail property, and Government House at Regina Sask; of court house at Wolseley, Sask; and court house at Yorkton, Sask; and Carnduff court house, Sask. | Government purposes | | 231,074 96 |
| " | 14 | Wabe Iron Works, Ltd | His Majesty | Release *in re* lots Nos. 1, 2 and 3, south side of Whitwood ave., New Liskeard, Ont. | Lake Timiskaming reservoir. Dam | | 6,700 00 |
| " | 15 | Certificate of Title | | Sale of part of lot No. 8, block 61, Calgary. Alta. | Site for post office | | |
| " | 19 | " " | | Sale of lots Nos. 9 and 10, block 3, Castor, Alta. | " " | | |
| " | 25 | Heirs of D. M. Gillis | His Majesty | Sale of land between public road, Elmira river (Grand Mira), N.S. | " wharf | 750 sq. ft. | 25 00 |
| " | 27 | Grand Trunk Railway Co., | " | Release for land at Callander, Ont. | " " | 6·56 acres | 100 00 |

No. 2—STATEMENT of properties purchased or sold by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what Purpose. | Area. | Price. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | $ cts. |
| Aug. 29 | His Majesty | Quebec Savings & Trust Co. Ltd. | Sale of lots Nos. 2198 and 2199, St. Quentin Island, Que. | Private enterprise | | 2,080 00 |
| Sept. 1 | A. G. Mather & L. I. Finnie *et ux* | His Majesty | Sale of part of lot No. 3, north side of Wellington st., Ottawa, Ont | Site for new departmental buildings | | 75,000 00 |
| " 1 | J. S. Finno & I Finno | " | Sale of land at Little Black River, N.B. | Site for new wharf | 11 acres | 100 00 |
| " 3 | Certificate of Title | | Sale of lot No. 1, block 15, Atlin, B C | " post office and Telegraph office | | |
| " 4 | J. Lightgon, *et ux* | His Majesty | Sale of part of lot B, south side of Front st., Bobcaygeon, Ont | Approach to wharf | 686 ft | 40 00 |
| " 7 | M. J. Barnes, *et ux* | " | Sale of land at Hampton, N.B. | Site for public building | 96·6 ft | 1 00 |
| " 14 | Peter McKellar, *et al* | " | Sale of part of lot No. 4, con. E, Island No. 1, Fort William, Ont | McKellar River improvements | 1·39 acres | 4,170 00 |
| " 14 | J. H. Ferguson, *et ux* | " | Sale of part of lot No. 2, con. E, Island No. 1, Fort William, Ont. | McKellar River improvements | 4·45 " | 13,350 00 |
| " 15 | Certificate of Title | | Sale of lots Nos. 352, 353 and 351, North Winnipeg, Man. | Site for drill hall | | 7,128 00 |
| " 15 | J. D. Deacon, *et al* | His Majesty | Sale of part of lot No. 5, con. E, Island No. 1, Fort William, Ont | McKellar River improvements | ·95 acres | 2,850 00 |
| " 15 | M. Deacon | " | Sale of part of lot No. 5, con. E, Island No. 1, Fort William, Ont | McKellar River improvements | 1·21 " | 3,630 00 |
| " 17 | Albert Lamb | " | Sale of lot No. 1, east side of May st., New Liskeard, Ont | Lake Timiskaming reservoir dam | | 600 00 |
| " 17 | J. H. Ferguson, *et ux* | " | Sale of water lot in front of lot No. 2, con. E, Fort William, Ont | McKellar River improvements | ·25 acres | 750 00 |
| " 19 | Notice of Expropriation | | Expropriation of land at Ste. Anne de Beaupré, Que. | Site for wharf | 180,000 ft. | |
| " 21 | M. G. Crombie, *et ux* | His Majesty | Sale of part of lot No. 1, con. E, Island No. 1, Fort William, Ont | McKellar River improvements | 4·41 acres | 13,230 00 |
| " 23 | H. C. McNeil | " | Sale of land at Piper's Cove, N.S. | Site for wharf | | 1 00 |
| " 25 | M. A. Blyth | " | Sale of part of lot No. 35, Victoria st., Ottawa, Ont | Site for new departmental buildings | 2,264 ft. | 2,655 00 |
| " 28 | M. Laffin | " | Sale of land at Sterling's Brook, N.S. | Dredging improvements | ·29 acres | 55 00 |
| " 30 | D. Fougere | " | Sale of land at Shediac Island, N.B. | Site for wharf | 0·56 " | 16 80 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " | 30 | E. Browne | " | Sale of east half of east half of lot No. 2, north side of Wellington st., Ottawa. Ont. | " new departmental buildings | | 24,295 00 |
| Oct. | 3 | L. Bang | " | Sale of lots Nos. 1 and 2, block 3, Sidney, B.C. | Site for public buildings | | 3,000 00 |
| " | 6 | W. Blackwood | " | Sale of part of lot No. 28, Winnipeg, Man | " wharf | 19,830 ft | 57,500 00 |
| " | 15 | F. A. Marsters, *et ux* | " | Sale of land at Lower Burlington, N.S. | " " | ¼ acres | 50 00 |
| " | 16 | M. C. Burke and J. A. O'Boyle, *et al* | " | Sale of north half of lot No. 23, east side of Kent st., Ottawa, Ont | " new departmental buildings | 33 ft x 66 ft | 7,936 50 |
| " | 21 | His Majesty | H. J. Hagan | Judgement *re* land and premises at Amherst, N.S. | Site for public building | | 30,000 00 |
| " | 23 | D. J. McQueen | His Majesty | Sale of lot, Mira Bay N.S. | " wharf | ·84 acre | 180 00 |
| " | 26 | M. A. Simard, *et al* | " | Sale of parts of land and right of way of lots Nos. 175, 176 and 164 at Ste. Anne de Beaupré, Que | " " | | 27,000 00 |
| " | 30 | Certificate of Title | | Sale of lots Nos. 1 and 2, block 11, Powell river, B.C. | Site for public building | | |
| " | 30 | Notice of Expropriation | | Expropriated land at Hawkesbury, Ont. | Interprovincial bridge | 79,945 ft | |
| " | 31 | M. and L. N. Poulin | His Majesty | Sale of part of lot No. 38, north side of Victoria st., Ottawa, Ont | Site for new departmental buildings | | 10,919 30 |
| " | 31 | Notice of Expropriation | | Expropriated land at Winnipeg, Man. | Site for wharf | 19,830 ft | |
| Nov. | 4 | His Majesty | J. M. Barnes | Grant of two-twelfths sq. ft. of land at Hampton, N.B. | Private enterprise | | Free grant. |
| " | 14 | " | John Ball | Quit claim *re* right of way at Hanover, Ont. | " " | | 1 00 |
| " | 14 | John Moody | His Majesty | Sale of lot No. 29, north side of Wellington st., Ottawa, Ont | Site for new departmental buildings | | 60,000 00 |
| " | 14 | Notice of Expropriation | | Expropriated land at Krant Point, N.S. | Site for wharf | ·2 acres | |
| " | 19 | Ernest Doniney | His Majesty | Sale of land at Fox Point, N.S. | " breakwater | ·06 acres | 50 00 |
| " | 20 | Notice of Expropriation | | Expropriated land at Kawartha Park, Ont | " wharf | 3 acres | |
| " | 21 | The Corporation of the City of Toronto | His Majesty | Sale of parts of lots Nos. 41 and 42, Toronto, Ont | " Customs examining warehouse | | 163,791 00 |
| " | 23 | Thos. Lawson & Son, Ltd. | " | Sale of west half of west half of lot No. 2, north side of Wellington st., Ottawa, Ont. | Site for new departmental buildings | | 19,223 00 |
| " | 24 | Robert Hastings | " | Sale of lots Nos, 30, 31 and 32, east side of Wellington st., New Liskeard, Ont. | Lake Timiskaming reservoir dam | | 1,400 00 |
| " | 25 | Incorporated Synod of Diocese of Toronto | " | Sale of lots Nos. 27 and 28, 3rd con., Shanty Bay, Ont | Site for wharf | ·35 acres | 1 00 |
| Dec. | 2 | M. A. Brazeau | " | Sale of lot No. 7, 1st con., Lièvre river, (Poupore) Que. | " lock and dam | 7,740 ft | 50 00 |
| " | 2 | Certificate of Title | | Sale of northeast quarter, sec. 28, tp. 20, R. 21, Regina, Sask. | Craven dam | 153·49 acres | |
| | 2 | " " | | Sale of northwest quarter, sec. 22, tp. 20, R. 21, Regina, Sask. | " | 160 acres | |

No. 2.—STATEMENT of properties purchased or sold by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what Purpose. | Area. | Price. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | $ cts. |
| Dec. 2 | Certificate of Title. | | Sale of southwest quarter, sec. 33, tp. 20, R. 21, Regina, Sask. | Craven dam | 160 acres. | |
| " 2 | " " | | Sale of southwest quarter, sec. 27, tp. 20, R. 21, Regina, Sask. | " | 63·5 acres. | |
| " 8 | " " | | Sale of parts of lots 6 and 7, tp. of Harris, Ont. | Lake Timiskaming reservoir dam | 225 acres | |
| " 11 | H. Talbot | His Majesty | Sale of part of lot No. 241, Ile Verte, Que. | Site for wharf | 6,250 ft. | 125 00 |
| " 11 | The Fabric of Notre Dame du Lac | " | Sale of part of lot No. 69, Notre Dame du Lac, Que. | " " | ¼ arpent | 50 00 |
| " 11 | D. L. Fraser | " | Sale of land at Feltzen South, N.S. | " " | 023 acres. | 80 00 |
| " 14 | W. E. Cunningham | " | Sale of land at Ballantyne's Cove, N.S. | " " | | 100 00 |
| " 18 | James Murray | " | Sale of part of lot No. 9, tp. of Bucke, Ont. | Lake Timiskaming reservoir dam | 7 acres | 150 00 |
| " 18 | Great Lakes Dredging Co., Limited | " | Sale of part of lot No. 7, con. D, Island No. 2, Fort William, Ont. | McKellar River improvements | ·50 acres | 1,500 00 |
| " 18 | Great Lakes Dredging Co., Limited | " | Sale of water lot in front of lot No. 6, con. C. Island No. 2, Fort William, Ont. | McKellar River improvements | ·31 acres | 930 00 |
| " 23 | D. J. Lafave. | " | Sale of land at North Belleville, N.S. | Site for wharf | ·133 acres. | 33 00 |
| 1915. | | | | | | |
| Jan. 2 | Ludger Gagnon. | " | Release for all claims and damages *re* land at Haileybury, Ont. | Lake Timiskaming reservoir dam | | 250 00 |
| " 6 | J. M. Guitar | " | Sale of land at Green Point, N.B. | Right of way of breakwater | 1·09 acres. | 100 00 |
| " 6 | A. Devereau, *et al* | " | Sale of land at Green Point, N.B. | " " | 1·22 acres. | 100 00 |
| " 7 | J. A. Belder & A. W. Cadman, *et al* | " | Release for all claims and damages *in re* lot No. 2, con. A, tp. of Harris, Ont. | Lake Timiskaming reservoir dam | | 250 00 |

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|---|---|---|---|---|---|---|---|
| " | 8 | The Upper Ontario Steamboat, Limited | " | Sale of part of lot No. 189, Latchford, Ont. | Latchford dam | 4,500 ft. | 1 00 |
| " | 8 | The Agricultural Society of District No. 110 (St. Charles) | " | Sale of land at St. Charles, N.B | Shipways | ·728 acres | 75 00 |
| " | 18 | J. Irwin | " | Sale of lots Nos. 6, 7, 8, 9 and 10, south side of Whitewood ave., New Liskeard, Ont. | Lake Timiskaming reservoir dam | | 1,280 00 |
| " | 19 | Certificate of Title | | Sale of part of southeast quarter, sec. 33, tp 20, R. 2, East Mountain Lake, Sask | Craven dam | 57·27 acres | |
| " | 20 | W. J. Evans | His Majesty | Sale of northeast corner of lot No. 4, 4th con. tp. of Harris, Ont. | Lake Timiskaming reservoir dam | 8·50 acres | |
| " | 29 | G. M. Warren | " | Sale of parts of lots Nos. 235 and 231, at Latchford, Ont. | Latchford dam | 1,136 ft. | |
| Feb. | 9 | Robt. Wentzell, *et al* | " | Sale of land at Indian Point, N.S. | Site for wharf | 390 sq. ft. | 25 00 |
| " | 11 | His Majesty | Rigaud Granite Co., Limited | Grant of part of lot No. 79, at Rigaud, Que. | Private enterprise | | 4,000 00 |
| Mar. | 2 | Certificate of Title | | Sale of lots Nos. 17 and 18, block 7, Tofino, B.C | Telegraph office | | |
| " | 3 | Provincial Government of New Brunswich | Dominion Gov't. | Transfer of wharf site, Bathurst, N.B. | For wharf | | Free transfer. |
| " | 4 | J. Lauzon, sr., and J. Lauzon, jr | His Majesty | Sale of land at Lauzon's Point, tp. of Portland, Que. | Right of way | 33 ft. x 1,836 ft. | 1 00 |
| " | 4 | M. Blyth, *et al* | " | Sale of part of lot No. 35, north side of Victoria street, Ottawa, Ont. | Site for new departmental buildings | 8,639 ft. | 21,145 87 |
| " | 4 | E. Lamothe | " | Sale of land and old wharf at St. Denis, Que. | Site for wharf | 7,666 ft. | 500 00 |
| " | 5 | N. and M. Parks | " | Sale of land at Long point, N.S. | " breakwater | 2 acres | 25 00 |
| " | 8 | Estate of J. M. Walsh | " | Sale of parts of lots 7 and 8, Island No. 2, Fort William, Ont. | Kaministiquia and Mission River improvements | | 1,290 00 |
| " | 11 | A. Labaye | " | Sale of lot No. 90 1, St. Frs. Xavier de Batiscan, Que. | Landing pier | 139·9 ft. x 3·7 ft. | 48 50 |
| " | 12 | S. McChesney | " | Sale of part of reserve, west side of Wahbe creek, New Liskeard, Ont. | Lake Timiskaming reservoir dam | | 100 00 |
| " | 16 | His Majesty | Harb. Commis'rs of Vancouver | Grant of water lot at Vancouver, B.C. | Private enterprise | 41·8 acres | Free grant. |
| " | 17 | Estate of J. H. Hunter | His Majesty | Sale of part of lot No. 9, tp. of of Harris, Ont. | Lake Timiskaming reservoir dam | 212 acres | 636 00 |
| " | 23 | Bannatyne Estate | " | Sale of part of lot No. 107, St. Andrews, Man. | St. Andrews Rapids improvements | | 462 90 |
| " | 23 | Mrs. Muir | " | Sale of block 13, except west half of lots Nos. 13, 14, 15, and 16, Vancouver, B.C. | Site for drill hall | | 10,250 00 |
| " | 24 | H. W. Whidden, *et al* | " | Sale of part of lot No. 3, con. E, Island No. 1, Fort William, Ont. | McKellar River improvements | 1 02 acres | 3,464 50 |

No. 2.—STATEMENT of properties purchased or sold by the Department of Public orks of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Date of Conveyance. | Vendors. | Purchasers. | Description of Property. | For what Purpose. | Area. | Price. |
|---|---|---|---|---|---|---|
| 1915. | | | | | | $ cts. |
| Mar. 24 | D. W. Duke | His Majesty | Sale of lots Nos. 11 and 12, block 3, Wilkie, Sask. | Site for public building | | 10,000 00 |
| " 25 | R. J. Blanchard | " | Sale of part of lot No. 3, con. E, Island No. 4, Fort William, Ont. | McKellar River improvements | 1·53 acres. | 5,203 68 |
| " 27 | Hambly Bros. and The Toronto Type-setting Co. | " | Release for all claims and damages in connection with new general post office at Toronto | | | 2,000 00 |
| " 27 | National Trust Co., Ltd. | " | Sale of part of east half of lot No. 41, Toronto, Ont. | Customs examining warehouse | | 113,805 83 |
| " 27 | A. Holland, *et ux* | " | Sale of part of lot No. 33, west side of Victoria st., and part of lot No. 34, north side of Vittoria st., and parcel of part of lot No. 34, Vittoria st., Ottawa, Ont. | New departmental buildings | | 87,862 99 |
| " 29 | Notice of Expropriation | | Expropriated land at Mulgrave, N.S. | Site for wharf. | 35 ft. x 88 ft. | |

# STATEMENT No. 3
# PROPERTY LEASED

No. 3.—STATEMENT of Properties leased to and from the Department of Public Works of Canada from April 1, 1914, to March 31, 1915.

| Date of Lease. | Lessors. | Lessees. | Description of Property. | For what Purpose. | Duration of Lease. | Rental. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | |
| April 1 | The Canadian Pac. Ry. Co. | His Majesty | Lease of parcel of land, Coal harbour, Burrard inlet (Vancouver) B.C. | Immigration detention building | So long as government maintains building | |
| " 3 | Town of Alsask | " | Lease of premises on lot No. 14, block 11, Alsask, Sask | Immigration purposes | 6 months from April 1, 1914 | $15 per month. |
| " 6 | J. C. L. Rivest | " | Lease of ground floor of building, corner St. Viateur and Ste. Marie sts., Joliette, Que. | Excise Branch | 1 year from May 1, 1914 | $300 per annum (renewable). |
| " 6 | J. U. & J. A. Chaput | " | Lease of ground floor and private dwelling Nos. 23, 25, and 27, Place Lavaltrie, Joliette, Que. | Customs and caretaker | 1 year from May 1, 1914 | $600 per annum (renewable). |
| " 7 | Russell Blackburn | " | Lease of two rooms, in building corner Sparks and Bank sts., Ottawa, Ont. | Dept of Public Works | 1 year | $350 (renewable). |
| " 8 | Leonard Frank | " | Lease of part of building on lot No. 1, block 11, Old Alberni, B.C. | Post office | 2 years | $200 per annum. |
| " 8 | J. J. Garland | " | Lease of building on Tupper street, Portage la Prairie, Man. | Customs examining warehouse | 1 year from occupation | $90 per month. |
| " 13 | J. E. Annable | " | Lease of four rooms in building, north-east corner of Ward and Victoria sts., Nelson, B.C. | District engineer Public Works Dept. | 1 year | $50 per month (renewable). |
| " 14 | C. J. Booth & J. A. D. Holbrook | " | Lease of three upper floors in "Booth building," Sparks st., Ottawa, Ont. | Government purposes | 5 years from occupation | $1 per foot. |
| " 15 | W. J. Boyd | " | Lease of office No. 406, in "Boyd building," Winnipeg, Man. | Archives Dept | From April 15, 1914 to March 31, 1916 | $47.50 per month. |
| " 16 | K. Levasseur | " | Lease of lower story of building on west half of lot No. 2, Pincher Creek, Alta. | Dept. of Interior | 1 year from Sept. 16, 1913 | $30 per month. |
| " 21 | Euclide Lachapelle | " | Lease of ground floor of building No. 19, Place Lavaltrie, Joliette, Que. | Post office purposes | 1 year | $720 per annum (renewable). |
| " 22 | J. G. Jackson & L. Clarke | " | Lease of two rooms on lot No. 5, block "D," King st., Cobourg, Ont | Immigration inspector | 1 year | $170 per annum. |
| " 23 | M. A. Barrett | " | Lease of premises on Queen st. east, Toronto, Ont. | Postal station "G" | 1 year and thereafter monthly | $200 per annum. |

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| May 1 | Patrick O'Sullivan | " | Lease of store and ground floor of "Sullivan block," Calgary, Alta | Customs express | 1 year from May 1, 1914, and thereafter from month to month | |
| " 4 | His Majesty | Price Bros. Co. Ltd | Lease of part of lot No. 4, B, range 10, of Signal tp., Belle Riviere, Que | Private enterprise | 21 years from May 4, 1914 | $125 per month. |
| " 4 | Wm. Dickinson | His Majesty | Lease of premises No. 18, Railway ave. east, North Battleford, Sask | Immigration purposes | 24 months from May 5, 1914 | $30 per month. |
| " 4 | Wm. Huckvale & S.T. Hooper | " | Lease of office No. 306 on lots Nos. 23 and 24, block 14, Medicine Hat, Alta. | " " | 1 year from June 1, 1914 | $1,200 per annum. |
| " 8 | Page Printing & Binding Co. | " | Lease of first floor of building Nos 3, 5, and 7, Albert st., Sherbrooke, Que | Post office inspector | 5 years | $28 per month. |
| " 11 | Richelieu & Ontario Nav. Co. | " | Lease of three rooms on third floor of Richelieu and Ontario building, Quebec, Que | Pilotage officers | 1 year from occupation | $996 per annum (renewable). |
| " 11 | A. C. Carter | " | Lease of ground floor of Centre store, "Minthorn" block, Orillia, Ont | Post office purposes | 1 year | $55 per month. |
| " 12 | Patrick Labelle | " | Lease of the whole of first and sec floors and 4800 feet of basement of building cor. Dalhousie and York sts., Ottawa, Ont | Pub. Printing and stationery | 5 years from Jan. 2, 1914 | $60 per month. |
| " 15 | Bryson Realty Ltd | " | Lease of four floors in building, Queen st., Ottawa, Ont | Interior and Public Works Depts | 5 years from April 25, 1914 | $11,500 per annum. |
| " 20 | Lord Furniture Co | " | Lease of premises Nos. 64 and 66, George st., Ottawa, Ont | Militia and Defence | From occupation to Feb. 20, 1916 | $8,596 per annum. |
| June 1 | Independent Securities, Ltd. | " | Lease of part of ground floor and two vaults in building cor. fourth ave and Seymour st., Kamloops, B.C. | Interior Dept | 3 years from occupation | $150 per month. |
| " 1 | W. J. Boyd | " | Lease of part of second floor in "Boyd building," Winnipeg, Man | Railway Commission | 1 year from occupation | $125 per month. |
| " 6 | J. E. Merryfield | His Majesty | Lease of first story of building, first ave., Prince Rupert, B.C | Examining warehouse | 3 years from June 1, 1914 | $1,830 per annum. |
| " 8 | Magloire Lepine | " | Lease of portion of building at Maisonneuve, Que | Post office | 1 year from May 1, 1914 | $175 per month. |
| " 10 | F. C. Baker | " | Lease of west half of "Baker building," south side of River st., Prince Albert, Sask | Interior Dept | 1 year from May 1, 1914 | $30 per month. |
| " 10 | Belmont Buildings, Ltd | " | Lease of part of ground floor of basement in "Belmont building, Victoria, B.C | Express Department and Customs postal parcels | 1 year from June 3, 1914 | $80 per month. |
| " 15 | The By-Town & Suburb Land Co. Ltd | " | Lease of premises No. 105, Murray st., Ottawa, Ont | Storage for Printing Bureau | 5 years from occupation | $200 per month. |
| " 17 | His Majesty | City of Windsor | Lease of part of of lots Nos. 3, 4, 5 and 6, north side of Sandwich st., Windsor, Ont | Private enterprise | During pleasure | $2,390 per annum. $1 per annum. |

No. 3 —STATEMENT of properties leased to and by the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Date of Lease. | Lessors. | Lessees. | Description of Property. | For what Purpose. | Duration of Lease. | Rental. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | |
| June 19.. .. | Miss Margaret White. ... | His Majesty.... | Lease of three rooms and vault in building, St. Louis st., Quebec, Que. | Archives .... ..... | 1 year .. .. .. .... | $30 per month. |
| " 25..... | Geo W. Dunlop..... .. | " .... | Lease of ground floor in premises Nos. 32 and 35, Main st., Vancouver, B.C. | Post Office Dept .. .... | 1 year from July 1, 1914..... .. | $90 per month. |
| July 4 ..... | The Can. Pac. Ry. Co..... | " .... | Lease of rooms in railway depot, Vancouver, B. C..... ..... | Post office ..... .... | 5 years from occupation .. .... | $1.22 per sq. foot. |
| " 15..... | Richelieu & Ontario Nav. Co. | " ... | Lease of room on second floor of building, Quebec, Que ... ..... | General Supt. of Pilots... | 1 year from June 1, 1914 ..... | $15 per month. |
| " 25 . ... | A. E. Potter..... .. | " .... | Lease of room in building, Edmonton, Alta.... ..... ..... ..... | Weights and Measures... | 1 year from Aug. 1, 1912..... | $420 per annum. |
| Aug. 12..... | His Majesty..... .... | Atlantic & Gravel Co. Ltd.. | Permission to dredge sand and gravel at Chester bay, N.S .. ..... | Private enterprise..... | 5 years from July 12, 1914..... | 0·05c. per cubic yard. |
| " 13.. .. | W.M.G.H. & G. W. Birks.. | His Majesty... | Lease of rooms Nos. 614, 615, 616, 617 and 618 in "Birks building," Vancouver, B. C..... ..... | Supt. of Dredges..... | 1 year from Dec. 1, 1914..... ... | $1620 per annum. |
| " 19.. . | R. L. & R. Blackburn..... | " .... | Lease of front room in basement of "Union Bank" building, Ottawa Ont .. ..... ..... ..... | Railway Lands Branch.... | ..... ..... | $350 per annum. |
| " 22.. .. | Dennis Realty Corporation.. | " .... | Lease of premises cor. Granville and George sts., Halifax, N.S..... | Militia and Defence..... | From occupation to Oct. 1, 1918..... | $3,112 per annum. |
| " 24..... | The Bank of Hamilton..... . | " .. | Lease of room No. 9 on second floor of building cor. Lorne and Cumberland sts., Port Arthur, Ont..... | For immigration ..... | 1 year from Nov. 15, 1914 ..... | $30 per month. |
| " 25 .... | A. E. Rea & Co..... .. | " .... | Lease of three upper floors of building cor. Rideau and Sussex sts., Ottawa, Ont..... | Marine and Fisheries and Naval Service. ..... | 5 years from occupation..... | 70 cents per foot. |
| " 26..... | Chester Thompson..... | " .... | Lease of ground floor of building, Saskatoon, Sask..... ..... ... | Customs ..... ... ... | 1 year from Dec. 14, 1914..... | $500 per month (renewable). |
| " 31 ..... | Sir Henry N. Bate Realty Corporation Limited..... | " ... | Lease of suite No. 6 "Aylmer annex," Ottawa, Ont ..... | Public Works Dept..... | 13 months and 13 days from Aug. 19, 1914..... | $648 per annum. |
| Sept. 2..... | G. J. Foy Ltd..... | " ... | Lease of five offices on second floor of building No. 32, Front st. west, Toronto, Ont ..... ..... | Steamboat inspectors.. ... | 1 year from Dec. 11, 1914. ..... | $1,300 per annum. |

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| " 5.. ... | J. H. Cameron & A. N. Johnston... ..... .. .... .. | " .... | Lease of rooms G and H on lots Nos. 24 and 25, Saskatoon, Sask . .. | For inspector of Weights and Measures. ... ..... | 1 year from Nov. 11, 1914 ... . | $126 per month. |
| " 10..... | R. L. & R. Blackburn ..... | " ... | Lease of rooms Nos. 608, 609, and 611, "Union Bank building" Ottawa, Ont..... .. ..... | Post Office Dept ..... | From occupation to July 15, 1918.... | $1,154 per annum. |
| " 18..... | His Majesty.... .... ..... | Council of Town of Goderich... | Lease of parcel of land at Goderich, Ont..... ..... | Private enterprise .... . | Area 9 acre during pleasure.... | $1.00 per annum. |
| " 21..... | Enclide Lachapelle ..... | His Majesty.... | Lease of additional premises at Joliette, Que..... | Post Office ..... ..... | From occupation to May 1, 1915..... | $20 per month (renewable). |
| " 21..... | The Imperial Canadian Trust Company..... | " ... | Lease of suites Nos. 412 and 415 in building cor. Twenty-first st. and First ave., Saskatoon, Sask . .... | Railway Mail Service and staff..... .... ..... | 1 year from Sept. 1, 1914 .... .... | $789 per annum. |
| " 25.. ... | Quebec Ry. Light & Power Co. Limited..... ..... . | " .... | Lease of rooms Nos. 500, 501, 502 and 503, in building cor. St. Joseph and Crown sts., Quebec, Que..... | District Engineer Public Works Dept..... | 19 months from Aug. 1. 1914.... | $1.25 per sq. foot. |
| " 28..... | Wm. Sinclair. ... . ..... | His Majesty.... | Lease of store, Edward ave, Le Pas, Man .... . .... ..... .. | Post Office.. ..... | 1 year from Sept. 15, 1914.... .... | $600 per annum. |
| " 28..... | J. Leonel Leduc . .. ... | " .... | Lease of two rooms in building cor. Ellice and Brown sts., Beauharnois, Que..... ..... ... ..... .... | " ..... .... ... | From July 1, 1914, to May 1, 1917. | $350 " |
| Oct. 1.... . | A. H. V. & H. H. Fortier... | " .... | Lease of two rooms on ground floor of building, St. George st., Annapolis Royal, N.S. ... .. ..... | Inspector of Immigration.. | 1 year from Sept. 1, 1914 .... .... | $15 per month. |
| " 5 .... | J. H. C Willoughby & H. J. E. Summer..... .. .... | " .... | Lease of ground floor and part of basement in building cor. Twentieth st. and Third ave., Saskatoon, Sask . | Examining wharehouse... | 2 years from June 17, 1914..... | $1,800 per annum. |
| " 7 ... | Canada Life Assurance Co. . | " ... | Lease of rooms Nos. 51, 52, 53 and 54, and half of vault in building at Calgary, Alta. ... ..... | Inland Revenue..... ... | 5 years from Jan. 1, 1914..... | $315 per month (renewable). |
| " 7..... | " " .... | " ... | Lease of rooms Nos. 41, 42, 43 and 44 and half of vault in building at Calgary, Alta. ..... .... .. | Post Office inspector ... | 5 years from Jan. 1, 1914..... | $315 per month (renewable). |
| " 7.... | " " .... | " ... | Lease of rooms Nos. 55, 56, 57 and 58 and half of vault in building at Calgary, Alta..... ..... ... | Railway Mail Service..... | 5 years from Jan. 1, 1914..... .. | $222 per month. |
| " 8.... | The Capital Storage Co., Ltd. | " .... | Lease of premises in building No. 136 Emmett st., Ottawa, Ont..... .. | Militia and Defence..... | 1 year and throughout continuance of war ..... | $1,650 per annum. |
| " 8.... . | His Majesty..... ..... . | Board of Governors of Boys' Industrial Home | Lease of old Penitentiary property at St. John, N.B..... | Private enterprise. ..... | 20 years from Mar. 31, 1914.... .... | $1 per annum. |
| " 13..... | W. R. Stroud. .. ..... | His Majesty.... | Lease of two floors in building No. 109 Rideau st., Ottawa . . .... | Militia and Defence. ... | From occupation to Feb. 20, 1916 | $1,677 per annum. |

No. 3.—STATEMENT of Properties leased to and from the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Continued.*

| Date of Lease. | Lessors. | Lessees. | Description of Property. | For what Purpose. | Duration of Lease. | Rental. |
|---|---|---|---|---|---|---|
| 1914. | | | | | | |
| Oct. 13 | Canadian Bank of Commerce | His Majesty | Lease of rooms 2 and 3 in "Canadian Bank of Commerce building," Revelstoke, B.C | Chief ranger, Interior Dept. | 1 year from Dec. 16, 1914 | $50 per month. |
| " 14 | Canadian Pac. Ry. Co | " | Lease of a parcel of land at Transcona, Man | Grain inspector | 1 year from Oct. 14, 1914 | $1 per annum (renewable). |
| " 15 | R. L. & R. Blackburn | " | Lease of front room in basement of "Union Bank building," Ottawa, Ont | Interior Dept | 1 year from Aug. 21, 1914 | $350 per annum. |
| " 16 | J. E. Hanna | " | Lease of "Egan building," Ottawa, Ont | Labour Dept | 5 years from Sept. 12, 1914 | $13,000 " |
| " 22 | R. C. Thomas | " | Lease of rooms Nos. 7, 8, 9, 10, 11 and 12 in building at Calgary, Alta | Interior Dept | From Jan. 24, 1915, to April 1, 1915, and thereafter from month to month | $145 44 per month. |
| " 23 | Heintzman & Co., Ltd | " | Lease of part of second floor in building cor. Ouellet and London sts., Windsor, Ont | District Engineer, Public Works Dept | 5 years from Oct. 2, 1914 | $1,200 per annum. |
| " 24 | Jackson, Clarke & O.G.Johns | " | Lease of two rooms in building north side of King st., Cobourg, Ont | Immigration inspector | 1 year from Oct. 1, 1914 | $170 per annum. |
| Nov. 4 | F. Y. Newton | " | Lease of second floor of building on lot No. 6, Roblin, Man | Supervisor of Riding Mountain reserve | 2 years from Dec. 1, 1914 | $27.50 per month. |
| " 10 | McCarthy, Carson & McLeod | " | Lease of rooms Nos. 211 and 220 and vault in "Dominion Bank building" at Calgary, Alta | Customs Dept | From Dec. 1, 1913, to March 31, 1915 | $250 per month. |
| " 11 | Sir H. N. Bate Realty Corporation, Ltd. | " | Lease of apartment No. 5, "Aylmer Annex, Ottawa, Ont | Militia and Defence | 2 years from Dec. 1, 1914 | $720 per annum. |
| " 12 | His Majesty | Northern Fish Co | Lease of a piece of land at Kingsville Harbour, Ont | Private enterprise | During pleasure | $5 " |
| " 12 | " | Lake Erie Fish Co | Lease of a piece of land at Kingsville Harbour, Ont | " " | " | $5 " |
| " 20 | A. Belanger, Ltd. | " " | Lease of building near I. C. Ry. station, Montmagny, Que | Public Works Dept | 2 years from Nov. 1, 1914 | $50 " |

| | | | | | | |
|---|---|---|---|---|---|---|
| " 20..... | G. L. Jakes..... | " " .. | Lease of part of Jakes block, Merrickville, Ont.. ... ..... | Post Office.. .. . ..... | 1 year from Jan. 1, 1915..... .... | $350 " |
| " 20..... | Grand Trunk Pac. Ry. Co... | " " .. | Lease of premises, being part of wharf, Prince Rupert, B. C.... .. | For immigration..... .. | 1 year from Nov. 20, 1914, and thereafter from year to year.... | $5 " |
| " 23..... | R. L. & R. Blackburn..... | " " .. | Lease of room No. 414 in "Union Bank building," Ottawa, Ont .... | Interior Dept..... ..... | 1 year ... ... ... | $371 " |
| " 23..... | His Majesty..... | E. J. Bawlf.... | Lease of lot No. 191, Winnipeg (Elmwood), Man ..... | Private enterprise..... | During pleasure... | $1 " |
| " 27..... | The Bank of Nova Scotia.... | His Majesty.... | Lease of rooms Nos. 1 and 2 in building, Water st., Windsor, N.S..... | Government offices .... | 1 year from June 30, 1914..... | $225 " |
| Dec. 2..... | E. W. Clark..... .... | His Majesty ... | Lease of premises No. 12 Emmett st., Ottawa, Ont..... | Militia and Defence..... | 3 years from April 30, 1915..... | $50 per month. |
| " 14.. ... | F. McKinnon..... ..... | " .... | Lease of premises No. 72 Elgin st., Ottawa, Ont... ..... | " ..... | 1 year from occupation ..... | $65 per month. |
| " 15..... | Municipal Council of the Village of Compton..... | " .... | Lease of room in town hall, Compton, Que.. ..... ..... ..... | Post office ..... | 10 years from occupation..... | $150 per annum. |
| " 16..... | 'The Herald' Build. Co., Ltd. | " .... | Lease of rooms Nos. 101, 102, 103, 112 and 113 on 11th street west, Prince Albert, Sask..... ..... | District Engineer, Public Works Department..... | From Nov. 1, 1914. | $100 per month monthly tenancy. |
| " 22. .... | Sir R. P. Roblin..... | " .... | Lease of premises No. 103 Osborne st., Winnipeg, Man .. ..... | Postal Station "C" ..... | 1 year from Feb. 1, 1915..... | $1,500 per annum. |
| " 28..... | Eva C. Carling ..... | " .... | Lease of 2, 3, 4, 5, 6 and 7 floors in Carling building, Ottawa, Ont..... | Government purposes. ... | 5 years from Feb. 20, 1915..... . | $13,000 per annum. |
| " 28..... | W. Stewart ..... ..... | " .... | Lease of building at Gronard, Alta... | Interior Department..... | From Aug. 1, 1913 | $60 per month monthly tenancy. |
| 1915. | | | | | | |
| Jan. 6..... | School District of Virden, No. 144 ..... | " .... | Lease of building at Virden, Man... | Immigration..... | 12 months from March 15, 1915.. | $250 per annum. |
| " 13. .... | H. Robinson..... . | " .... | Lease of store and basement in Robinson's building, Ottawa, Ont..... | Postal store..... . | ..... | $1,200 per annum. |
| " 15..... | Ruby Lake Lumber Co..... | " .... | Lease of room and stable at Ruby Lake, Sask..... .. ..... .... | Forest Supervisor. ..... | ..... | $15 per month monthly tenancy. |
| " 15..... | Confederation Life Associat'n | " .... | Lease of office No. 703 with vault in building at Toronto, Ont ..... | Resident Engineer.... .. | 1 year from Jan. 1, 1915 ..... ... | $575 per annum. |
| " 20..... | J. O. Patterson..... ..... | " .... | Lease of parts of building at Grande Prairie, Alta... .. ..... | Immigration..... | 1 year from Jan. 1, 1915..... ... | $65 per month. |
| " 22.. .. | A. J. C. McDermott..... | " .... | Lease of building cor. Langley and Broughton sts., Victoria, B.C..... | Examining warehouse.... | 2 years from Jan. 1, 1915..... | $500 per month. |
| " 25..... | The Notre Dame Investment Company, Limited ..... .. | " .... | Lease of offices Nos. 701, 702, 703 and 704 Notre Dame ave. east, Winnipeg, Man..... ... | District Engineer, Public Works Department.. .. | 5 years from Jan. 1, 1915..... | $1,500 per annum. |

No. 3.—STATEMENT of Properties Leased to and from the Department of Public Works of Canada from April 1, 1914, to March 31, 1915—*Concluded.*

| Date of Lease. | Lessors. | Lessees. | Description of Property. | For what Purpose. | Duration of Lease. | Rental. |
|---|---|---|---|---|---|---|
| 1915. | | | | | | |
| Jan. 29 | J. S. Bergeron | His Majesty | Lease of second floor of building, St. John st., Quebec, Que | Colonization office | 1 year from May 1, 1915 | $450 per annum. |
| Feb. 11 | Miss M. White | " | Lease of three rooms in building, St. Louis st., Quebec, Que | Archives Department | 1 year from April 30, 1915 | $30 per month. |
| " 13 | J. S. Bergeron | " | Lease of offices in building, No. 105 St. John st., Quebec, Que | Public Works Department | 1 year from May 1, 1915 | $350 per annum. |
| " 15 | Confederation Life Associat'n | " | Lease of offices Nos. 542, 543, 544, 545 and vaults in Confederation Life Chambers, Toronto, Ont | District Engineer | 1 year and 7 months from Feb. 15, '15 | $2,500 per annum. |
| " 16 | K. Levasseur | " | Lease of lower story of building, Pincher Creek, Alta | Interior Department | Sept. 16, 1914 | $30 per month monthly tenancy. |
| " 17 | Council of the City of Moosejaw | " | Lease of lots Nos. 27 and 28, block 127, Moosejaw, Sask | Immigration hall | 1 year from April 15, 1915 | $100 per annum. |
| " 17 | The Berlin Rink & Auditorium Co., Ltd | " | Lease of store on Queen st., Berlin, Ont | Examining warehouse | 2 years from Feb. 15, 1915 | $55 per month. |
| " 23 | T. E. Boudreau | " | Lease of room in building, Ferry st., Edmundston, N.B | Inspector of Immigration | 1 year from March 1, 1915 | $10 per month. |
| " 27 | J. P. Tardivel | " | Lease of part of building, No. 35 Chemin Ste. Foye, Quebec | Candiane postal station | 5 years from Sept. 12, 1912 | $300 per annum. |
| Mar. 4 | C. W. Cooper & W. A. Cooper | " | Lease of tenement, Portage ave. and Aubrey st., Winnipeg, Man | Postal Station "D" | 12 months from April 1, 1915 | $1,800 per annum. |
| " 5 | C. B. Munro | " | Lease of lots Nos. 16 and 17, and part of lot No. 15, block 30, Calgary, Alta | Storage purposes | 1 year from Feb. 23, 1915 | $45 per month. |
| " 6 | His Majesty | North Western Telephone, Ltd. | Permission to utilize poles of Government line at Spirit river, Grande Prairie and Beaver lodge, Sask | Private enterprise | | $1 per mile. |
| " 11 | Council of Town of Shoal Lake | His Majesty | Lease of room in town hall building, Shoal lake, Man | Post office | 3 years from March 1, 1915 | $360 per annum, renewable. |
| " 11 | H. H. Buxton | " | Lease of premises on lots Nos. 8, 9 and 10, block 7, Deloraine, Man | Immigration | 1 year from April 1, 1915 | $300 per annum. |
| " 12 | Quebec Buildings Ltd | " | Lease of five rooms in building, Wellington st., Ottawa, Ont | Railways and canals | 1 year from May 1, 1915 | $1,200 per annum. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " | 26..... | The Imperial Canadian Trust Co. of Saskatoon..... | " | .... | Lease of suites Nos. 412 and 415 in building at Saskatoon, Sask. .... | Railway mail service ..... | 1 year from Sept. 1, 1915..... | $631.20. |
| " | 27..... | Royal Bank of Canada..... | " | .... | Lease of third floor and two rooms on second floor and space in basement of building, cor. Metcalfe and Sparks sts., Ottawa, Ont.... .... | Interior Department... .. | 5 years from occupation..... | $4,747.10. |
| " | 29..... | F. C. Rice..... ... | " | ... | Lease of building on Main road at Weymouth, N.S..... .... | Post office..... | 1 year from June 1, 1915 .... ..... | $200 per annum. |

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, July 12, 1915.

J. A. CHASSÉ,
*Law Clerk.*

# LIST

OF SOME OF THE

# ACTS OF PARLIAMENT

## PASSED AT THE SESSION OF 1915

HAVING REFERENCE TO THE

DEPARTMENT OF PUBLIC WORKS, OR WORKS UNDER ITS CHARGE

LIST OF SOME OF THE PUBLIC ACTS of the Parliament of the Dominion of Canada, passed at the Fifth Session of the Twelfth Parliament, begun and holden at Ottawa, on the Fourth day of February, 1915, and closed by Prorogation on the Fifteenth day of April, 1915, and having reference to the Public Works Department or works under its charge (5 George V), and Orders of the Governor General in Council, having force of law.

| Subject. | Full Title of the Statute. | Chapter | Page in Statute Book |
|---|---|---|---|
| Sums granted to His Majesty for the financial years ending respectively the 31st day of March, 1915, and the 31st day of March, 1916, and the purpose for which they are granted. | An Act for granting to His Majesty certain sums of money for the public service of the financial years ending respectively the 31st March, 1915, and the 31st March, 1916. | 24 | 107-113-150 Schedule A.B.C. (Appropriation Act.) |

N.B.—By proclamation dated the 10th of March, 1915, the tariff of tolls which the Upper Ottawa Improvement Company, Limited, of Ottawa, propose to levy for the use of their works during the season 1915, was approved.

*Vide Canada Gazette,* vol. xlviii., page 2927.

By proclamation dated the 31st of March, 1915, the tariff of tolls which the Rouge Boom Company propose to levy for the use of their works during the season 1915, was approved.

*Vide Canada Gazette,* vol. xlviii., page 3165.

By proclamation dated the 31st of March, 1915, sections 1, 8, 10, 11, 16A, and 16C of the rules and regulations for the management of the graving dock at Esquimalt, B.C., were amended, and section 4 of said rules and regulations was amended and divided into two sections to be known as 4A and 4B.

*Vide Canada Gazette,* vol. xlviii., page 3165.

By proclamation dated the 8th of May, 1915, the tariff of tolls to be levied by the French River Boom Company, Limited, for the use of their works during the year 1915, was approved.

*Vide Canada Gazette,* vol. xlviii, page 3601.

J. A. CHASSE,
*Law Clerk.*

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, August 1, 1915.

# THE NATIONAL GALLERY

## REPORT

## FOR THE FISCAL YEAR ENDED MARCH 31, 1915

THE NATIONAL GALLERY OF CANADA.

# ANNUAL REPORT OF THE TRUSTEES, 1914–15.

At the beginning of the fiscal year 1914-15, the Trustees of the National Gallery, in accordance with the terms of the Act 3-4, George V, passed 6th June, 1913, to incorporate the National Gallery under their management undertook the expenditure of the annual appropriation. The following report sets out the more important actions of the trustees towards fostering a better understanding of art throughout the country, and includes a complete list of the objects of art purchased and a financial statement of the expenditure of the annual appropriation of $100,000 for 1914-15.

The trustees met formally on two occasions and informally on other occasions, and the following objects of art were added to the possessions of the National Gallery by gift, loan, and purchase:—

GIFT—

H.R.H. Princess Patricia of Connaught presented the National Gallery with two of her oil paintings: "Hyacinths and Porcelain," and "A Woodland Glade."

LOANS—

The Ehrich Galleries, New York, lent an important oil painting by Luca Giordano, entitled "Adam and Eve."

Mr. Emil. D'Aoust lent an oil painting by Henri Julien entitled "La Chasse-Galerie."

DIPLOMA PICTURES—

The following diploma works were deposited in the National gallery by members of Royal Canadian Academy on their election:—"Between Showers," oil painting by J. W. Beatty, R.C.A.; "Burwash Hall, Victoria College, Toronto," by Henry Sproatt, R.C.A.

PURCHASES—

*Oil Paintings*—

| | |
|---|---|
| Chas. Gruppe | Sunny Day on the Beach. |
| Francesco Goya | A Governor of Cadiz. |
| Claude Monet | Waterloo Bridge, Soleil dans la Brouillard. |
| Alfred Sisley | Laveuses près de Champagne. |
| J. F. Millet | Oedipus Taken from the Tree. |
| Spanish School, 17th century | The Slave. |
| E. Wyly Grier | Portrait of the Artist. |
| Arthur Lismer | The Road Through the Bush. |
| T. G. Greene | The Creek. |
| C. W. Jefferys | Winter Afternoon. |
| T. Thomson | Moonlight, Early Evening. |
| Owen Staples | The Sonata. |
| Ernest Lawson | Winter. |
| F. M. Bell-Smith | A Tune of Long Ago. |
| J. E. H. Macdonald | The Shining River, Spring. |
| Ernest Fosbery | Breakfast. |
| A. H. Robinson | Evening Lights. |
| Arthur Crisp | L'Encore. |
| Arch. Browne | Silver Birches. |
| F. Brownell | On the Beach, Basseterre, W.I. |
| F. Challener | Wild Steeds of the Prairie. |
| W. Clapp | Summer Landscape, St. Sulpice. |
| Lauren Harris | Winter Morning. |
| W. Hope | The Sand Bar. |
| A. Y. Jackson | Red Maple. |
| A. W. Kilgour | Flecked by the Morning Sun. |
| Mabel May | Street Scene, Montreal. |
| Florence McGillivray | Afterglow. |
| H. S. Palmer | Fall Ploughing. |
| G. A. Reid | The Village in the Valley. |
| Maurice Cullen | Winter Evening, Quebec. |

*Drawings, Etchings, etc.*

Honore Daumier.. .. .. .. .. .. .. A L'Audience.
John Kettlewell.. .. .. .. .. .. .. Alladin.
" .. .. .. .. .. .. .. Caprice.
" .. .. .. .. .. .. .. La pas de joie.
Mary Cassatt.. .. .. .. .. .. .. Enfant au fauteuil.
" .. .. .. .. .. .. .. On the Tramway.
" .. .. .. .. .. .. .. La mère.
T. Rowlandson.. .. .. .. .. .. Scene at Inland Watering Place.
" .. .. .. .. .. .. The Port.
" .. .. .. .. .. .. Highland Fling.
" .. .. .. .. .. .. Departure from a Levee.
F. Challener.. .. .. .. .. .. .. Her Heart's Desire.
J. Ruysdael.. .. .. .. .. .. .. The Cottage on the Hill.
" .. .. .. .. .. .. .. The Cornfield.
C. Bega.. .. .. .. .. .. .. .. Head of a Peasant Woman.
" .. .. .. .. .. .. .. .. Head of a Peasant.
" .. .. .. .. .. .. .. .. Laughing Peasant.
" .. .. .. .. .. .. .. .. Peasant Woman.
F. Bol.. .. .. .. .. .. .. .. Philosopher.
P. Bout.. .. .. .. .. .. .. .. The Meet.
" .. .. .. .. .. .. .. .. The Landing Stage.
A. van Dyck.. .. .. .. .. .. .. Ecce Homo.
P. Potter.. .. .. .. .. .. .. .. The Neighing Horse.
After Guido Reni.. .. .. .. .. .. Chiaroscuro Sibyl.
" .. .. .. .. .. .. " "
" .. .. .. .. .. .. " "
" .. .. .. .. .. .. " "
H. Holbein .. .. .. .. .. .. .. Death and the Knight.
" .. .. .. .. .. .. .. Title-page.
" .. .. .. .. .. .. "
L. van Leyden .. .. .. .. .. .. Abraham and the Three Angels.
" .. .. .. .. .. .. Woman with Grapes.
" .. .. .. .. .. .. Ornamental Design.
" .. .. .. .. .. .. Self Portrait.
A. Durer.. .. .. .. .. .. .. .. Virgin with Crown and Sceptre.
" .. .. .. .. .. .. .. The Four Horsemen.
" .. .. .. .. .. .. .. The Rider and the Man at Arms.
M. Schongauer.. .. .. .. .. .. St. Thomas.
A. Altdorfer.. .. .. .. .. .. .. Nymph and Two Satyrs.
Raimondi.. .. .. .. .. .. .. .. Adam and Eve.
" .. .. .. .. .. .. .. .. Two Satyrs Carryng a Child.
D. Campagnola.. .. .. .. .. .. The Battle.
Claude.. .. .. .. .. .. .. .. .. Seaport with Lighthouse.
" .. .. .. .. .. .. .. .. Seaport with Round Tower.
A. Canale. .. .. .. .. .. .. .. Le pelerin en priere.
Ph. Zilcken.. .. .. .. .. .. .. Portrait of Annie Rumpf.
F. Buhot.. .. .. .. .. .. .. .. Les oies.
R. Bush .. .. .. .. .. .. .. .. The Village of Mousehole.
" .. .. .. .. .. .. .. .. Mill Stream at Llandaff.
Chas. Watson .. .. .. .. .. .. Groothodspoort.
" .. .. .. .. .. .. The Tower Bridge.
Minna Bolingbroke.. .. .. .. .. The Weaver.
" " .. .. .. .. .. St. Swithin In London.
" .. .. .. .. .. .. To the River.
" " .. .. .. .. .. Dead Birds.
Mary Sloane.. .. .. .. .. .. .. Miss Harwood as "Oxford."
" .. .. .. .. .. .. .. On the Banks of the Soar.
" .. .. .. .. .. .. .. Bridge over the Soar.
" .. .. .. .. .. .. .. Bridge Wharf, Wareham.
J. Wright.. .. .. .. .. .. .. .. The Silent Pool.
W. Strang .. .. .. .. .. .. .. The Brick Field.
" .. .. .. .. .. .. .. Self Portrait.
" .. .. .. .. .. .. .. C. Desclayes, Esq.
" .. .. .. .. .. .. .. Cosmo Monkhouse.
" .. .. .. .. .. .. .. Stirling Castle.
" .. .. .. .. .. .. .. F. Goulding, Esq.
Minna Bolingbroke.. .. .. .. .. Riva degli Schiavoni.
E. Lumsden.. .. .. .. .. .. .. Paint Works, Victoria.
" .. .. .. .. .. .. .. The Empress Government Buildings, Victoria.
" .. .. .. .. .. .. .. Fort Street, Victoria.
" .. .. .. .. .. .. .. The Path by Gunga.
" .. .. .. .. .. .. .. Pilgrims, Benares.
" .. .. .. .. .. .. .. Timber Houses, Victoria.
James McBey .. .. .. .. .. .. Grimnesseluis.
" .. .. .. .. .. .. A Fishing Harbour.

SESSIONAL PAPER No. 19

*Drawings, Etchings, etc.*—Continued.

| | |
|---|---|
| Samuel Palmer | The Early Ploughman. |
| " | The Herdsman. |
| John Crome | Mousehole Heath. |
| " | Sandy Road Through Woodland. |
| " | Landscape with Bridge and Horseman. |
| A. Geddes | Trees in Hyde Park. |
| " | Lady Drummond. |
| " | View in Richmond Park. |
| David Wilkie | Beggar Family. |
| " | The Cottage Door. |
| " | Reading the Will. |
| E. T. Daniell | River Scene. |
| " | Cottage. |
| " | Houses by the River. |
| " | The Farm. |
| " | The Bridge. |
| J. M. Whistler | The Tyresmith. |
| " | The Winged Hat. |
| " | Chelsea Rags. |
| " | Maunder's Fish Shop. |
| " | Nocturne, Battersea. |
| A. Lepere | Le bocage. |
| " | Retour des champs. |
| " | Rue de la Montagne. |
| " | Ste. Geneviève, Paris. |
| " | Quai des Grands Augustins. |
| " | Fin de Journée. |
| P. Thomas | The Village Blacksmith. |
| " | The Tower Bridge. |
| E. Bejot | Pont St. Louis. |
| F. Bracquemond | Le canard. |
| M. Lalanne | La Plantaine de Royan. |
| " | Vue de Bas-Meudon. |
| " | Rue des Marmousets, Paris. |
| " | Démolitions, Boulevard, St. Germain. |
| Charles Jacque | La petite ville. |
| " | The Ferge. |
| " | Le petit troupeau de mouton. |
| A. Appian | Le Soir. |
| " | Paysage au bateau. |
| " | Barques de Cabotage. |
| " | Un Soir d'automne, bords du Rhône. |
| " | Paysage au pêcheur. |
| " | Le lac aux rochers. |
| W. W. Alexander | Near Lorette. |
| John W. Cotton | The Flowing Tide. |
| " | Old Flemish Mill. |
| A. E. Waite | Cannon Street Station. |
| " | Cannon Street Bridge. |
| A. L. Laur | Fantasy. |
| " | Harvesting. |
| " | Summer. |
| " | The River. |
| " | Evening. |
| Dorothy Stevens | The Apache. |
| " | The Boulevardier. |
| " | The Gamin. |
| " | Study of Head. |
| " | The Cellist. |
| " | St. Jacques, Dieppe. |
| " | Sortie de l'église. |
| S. H. Maw | The Cathedral, Interior. |
| " | Toronto Bay. |
| T. G. Greene | Horses. |
| " | Playing Cards. |
| W. J. Thomson | Fisherman's Harvest. |
| " | King St., Toronto. |
| " | Grand River, Galt. |
| Ernest Fosbery | From Governor's Bay, Ottawa River. |
| " | A Corner of the East Block. |
| " | Spire of St. Andrew's Church, Ottawa. |
| " | The Birch Tree. |
| " | Ottawa. |
| " | Gatineau Point. |
| Martin Hardie | A Far Prospect. |

*Drawings, Etchings, etc.*—Concluded.

| | |
|---|---|
| Martin Hardie | Martello Towers, Hythe. |
| " | Hey Ho! The Wind and the Rain! |
| " | The Lonely Willow, Wareham. |
| " | Shivered Timbers. |
| " | A Seaboard Hamlet, Norfolk. |
| " | The Mill. |
| W. H. Whydale | The Seashore. |
| " | The Crest of the Hill. |
| " | The Chalk Pit. |
| " | The Barn. |
| " | The Rickyard. |
| L. Mansfield | Buildings Old and New. |
| " | Blythburgh Church. |
| " | The Bridge Builders. |
| " | Sizewell, Suffolk. |
| " | The Beach Road, Slaughden. |
| " | On the Alde. |
| A. Zorn | Crown Princess of Sweden. |
| " | Shallow. |
| " | Frida. |
| L. L'Hermitte | Portrait of the Painter, C. F. Daubigny, Esq. |
| " | La St. Nicolas. |
| " | L'enfant méchant. |
| Ph. Zilcken | Tête de vieille femme. |
| " | La canal. |
| Edith Patterson | Bath of Caracalla. |
| " | Portsmouth Harbour. |
| " | Back Hill, Winchelsea. |
| Arthur Crisp | Five drawings and one water colour for his oil picture "L'encore." |
| Edith Patterson | Il Monte Rosa. |

*Water Colours*—

| | |
|---|---|
| O. R. Jacobi | A Forest Stream. |
| Harriet Ford | Piazetta. |
| " | Gondolas. |

*Bronzes*—

| | |
|---|---|
| A. L. Barye | Sleeping Greyhound. |
| " | Reindeer. |
| " | Stag with Antlers. |
| " | Walking Tiger. |
| " | Walking Lion. |
| " | Ratel Stealing Eggs. |
| " | Elephant Mounted by Indian Attacking Tiger. |
| " | Charging Bull. |
| " | Resting Lioness. |

*Pastels*—

| | |
|---|---|
| Mrs. Eastlake | Japanese Children at Play. |
| " | Happiness. |
| Chas. de Belle | Wayfarers. |

*Stained Glass*—

English, Thirteenth Century.

The close of the year 1914-15, finds the National Gallery possessed of a collection of 1,046 original works of art, ancient and modern; also an exhibition of coloured prints of the world's most famous pictures, and a collection of casts of many of the world's most famous sculptures. The adequate exhibition of this increasingly valuable collection grows more and more difficult each year owing to the extremely limited space at the disposal of the National Gallery in the Victoria Museum. The amount of the appropriation for 1914-15 enabled the trustees to add several important and well known works of art to the National Gallery, foremost among which were the fine oil painting by Jean Francois Millet, entitled "Oedipus taken from the Tree," "A Governor of Cadiz," an oil painting by Francesco Goya, the last of the great Spanish painters of the 18th century, and "Waterloo Bridge, The Sun in a Fog," by Claude Monet, one of the pioneers of the great impressionist school of 1870, which has so

greatly influenced the art of the present day. There were also added nine bronze animal sculptures by Antoine Barye, the greatest of the French animal sculptors, and many other works of great importance.

The National Gallery annual travelling scholarship was awarded for the first time in November, 1914, to Miss Emily Coonan, of Montreal.

The trustees have issued reproductions in photogravure of a number of the most important pictures in the National Gallery in the form of prints 7 by 5 inches and post-cards. These reproductions are being sold as cheaply as possible, and it is hoped that they will prove a valuable factor in spreading a knowledge of the National Gallery, and consequently a better appreciation of art in general throughout the Dominion.

In pursuance of the policy formulated and tried last year, the trustees have arranged three loan exhibitions of from twenty to twenty-five Canadian and foreign pictures each. These three exhibitions are now at Winnipeg, Man., Hamilton, Ont., and St. John, N.B. The pictures are lent for one year, with an option of an exchange or renewal at the end of that time. It is the policy of the National Gallery in this matter to try to arrange a loan of pictures to any art body in the Dominion which possesses proper facilities for exhibiting them and can meet the moderate expenses of transportation and insurance. By this means, the examples of Canadian art purchased by the National Gallery will circulate throughout the country, and a better understanding of the achievements of Canadian artists will be gained.

It is interesting to record at this time that Canadian art is undergoing a great change and a greater growth. The earlier Canadian artists who were trained entirely in Europe, and who were encouraged by Canadians when they were encouraged at all, to paint European pictures or at best to see Canada through European eyes, are passing. A younger generation is coming to the fore, trained partly in Canada, believing in and understanding Canada and, to some small, though quite insufficient, extent encouraged by Canadians. These artists are painting their own country and realizing its splendours and its character with an outburst of colour and enthusiasm which bids fair to carry all before it. The exhibitions of the past year have illustrated this movement more widely than ever before, and many are convinced that they are looking into the dawn of a new art era in Canada which will glorify their country and help its people towards a better understanding of one of the greatest refining influences in the national life.

The attendance at the National Gallery during the past year has fallen off somewhat, 46,654 persons being registered at the turnstiles as opposed to 63,352 during the previous year, while the Sunday attendance for the winter months totalled 18,037, an average of nearly 700 per Sunday. The Sunday attendance, however, cannot be compared to that of the previous year, as it was not put into operation until December, 1913. There are several causes contributing to the falling-off in the attendance. The war has caused many people with leisure and interest in art to be fully occupied with charitable and patriotic works. There has been little social life in Ottawa, and since the commencement of the present year, 1915, the closing of the main entrance to the Victoria Museum has deterred many from visiting it, who before were in the habit of doing so.

A new edition of the National Gallery catalogue has been made necessary by the many recent acquisitions, and it will be on sale shortly.

| | |
|---|---|
| Sales of catalogues for the year | 210 |
| Sales of photogravure reproductions, 7 x 5 | 300 |
| Sales of post cards | 1,413 |

In July, 1915, the services of a catalogue clerk became necessary, and Miss Winifred Fyles was transferred from the Auditor General's Department. In September,

1914, Miss Irwin, secretary to the director, resigned in order to be married to Dr. Alfred Tingle of the Customs Department, and Miss Edna Snelling, secretary to the Deputy Minister of Public Works, was transferred to take her place.

B. E. WALKER,

*Chairman of the Board of Trustees.*

FRANCIS J. SHEPHERD,

*Trustee.*

ERIC BROWN,

*Director.*

## NATIONAL GALLERY—APPROPRIATION ACCOUNT.

| Date. | No. of Cheque. | To Whom Paid. | Dr. to Appro. | Expenditure |
|---|---|---|---|---|
| | | Appropriation | $100,000 00 | $ cts |
| April 20 | No. 1 | National Gallery Trust Account | | 500 00 |
| " 20 | " 2 | Stephen Bourgeois, (2 oils) | | 8,500 00 |
| " 20 | " 3 | Cottier & Co. (1 oil) | | 2,700 00 |
| May 6 | " 4 | Knoedler & Co. (4 drawings) | | 325 00 |
| " 6 | " 5 | Gagen R. F. (purchases, O.S.A.) | | 890 00 |
| " 7 | B. of Ex. 1 | Gutekunst, R. (etchings, etc.) | | 2,129 52 |
| " 7 | " 2 | Gutekunst, R. (insurance) | | 1 87 |
| " 7 | " 3 | Eastlake, Mrs. (2 pastels) | | 229 95 |
| " 7 | " 4 | Fine Art Trade Journal | | 33 96 |
| " 7 | " 5 | McMillan, Jas. (insurance) | | 17 52 |
| " 19 | No. 7 | Scott & Sons (pastel) | | 100 00 |
| June 1 | " 8 | National Gallery Trust Account | | 500 00 |
| " 25 | " 9 | Cottier & Co | | 20,060 00 |
| " 30 | " 10 | Slochem, H. Van (1 oil) | | 15,000 00 |
| " 30 | " 11 | Ehrich Galleries (1 oil) | | 1,500 00 |
| " 30 | " 12 | Durand-Ruel (1 oil, 3 etch) | | 9,120 00 |
| " 30 | " 13 | Charles Gallery (stained glass) | | 973 33 |
| " 30 | " 14 | Johnson Gallery (1 watercolour) | | 600 00 |
| " 30 | " 15 | Fosbery, E. (6 etchings) | | 46 00 |
| " 30 | B. of Ex. 8 | Reid, Alex. (5 oils) | | 14,500 00 |
| " 30 | " 9 | Gutekunst, R. (etchings, etc.) | | 491 53 |
| " 30 | " 10 | Medici Society (frames) | | 937 56 |
| " 30 | " 11 | Rowley Galleries (frames) | | 23 12 |
| July 3 | No. 16 | Canadian Art Club (oil) | | 400 00 |
| " 14 | " 18 | National Gallery Trust Account | | 500 00 |
| Aug. 1 | " 19 | Cottier & Co (bronze) | | 7,500 00 |
| " 22 | " 20 | Thomson, Wm. (etchings) | | 78 00 |
| Sept. 8 | " 21 | National Gallery Trust Account | | 500 00 |
| Oct. 2 | " 22 | Shaw, A. E. (reproductions) | | 754 25 |
| " 2 | " 23 | Receiver General (typewriter) | | 138 68 |
| " 20 | B. of Ex. 12 | McMillan, Jas. (insurance) | | 39 91 |
| " 20 | " 13 | Graves, Algernon (books) | | 124 10 |
| " 27 | No. 24 | National Gallery Trust Account | | 500 00 |
| " 27 | " 25 | Shaw, A. E. (postcards) | | 705 00 |
| Nov. 5 | " 26 | Patterson, A. D. (etchings, etc.) | | 45 00 |
| " 6 | " 27 | Gagen, R. F. (purchases at Canadian National Exhibition) | | 1,870 00 |
| " 9 | B. of Ex. 14 | Goupil & Co. (subs. to Senefelder Club) | | 5 11 |
| " 9 | No. 28 | Cleghorn & Beattie (linen) | | 117 69 |
| " 9 | " 29 | Artists' Supply Co | | 78 36 |
| " 19 | " 30 | Art Museum (etchings, etc.) | | 358 00 |
| " 26 | " 32 | R.C.A. (scholarship) | | 1,000 00 |
| " 26 | " 33 | R.C.A. (fourteen pictures) | | 3,720 00 |
| Dec. 9 | " 34 | Cottier & Co. (Trans. Del Sarto) | | 399 50 |
| " 23 | " 35 | National Gallery Trust Account | | 500 00 |
| 1915. | | | | |
| Jan. 14 | B. of Ex. 15 | Butcher & Sons, (photographic lens) | | 5 11 |
| Feb. 3 | " 16 | Graves, Algernon (books) | | 21 96 |
| | No. 36 | National Gallery Trust Account | | 500 00 |
| March 3 | " 37 | Sir Edmund Walker, travelling expenses, March to November, 1914 | | 144 98 |
| " 29 | B. of Ex. 17 | Rowley Gallery (frames) | | 45 62 |
| April 8 | No. 38 | Crisp, Arthur (drawings) | | 300 00 |
| " 8 | " 39 | National Gallery Trust Account | | 450 00 |
| | | Balance | | 76 43 |
| | | | $100,000 00 | 100,000 00 |

# NAMES OF THE CHIEF OFFICERS

OF THE

# DEPARTMENT OF PUBLIC WORKS

WITH

DATES OF APPOINTMENT, Etc., FROM 1841 TO 1915.

THE NAMES AND DATES of the appointments, etc., of the principal Officials of the Department of Publie Works, from 1841 to 1915:—

| Names. | Capacity or Office. | Date of Appointment. Service. From. | To. |
|---|---|---|---|
| *Under Statute 4-5 Vic., Chap. 38.* | | | |
| CORPORATION BOARD OF WORKS. | | | |
| Killaly, Hon. H. H.. | Chairman | | |
| Daly, Hon. D | | | |
| Harrison, S.B | Members | Dec. 29, 1841 | Oct. 3, 1844 |
| Sullivan, R. B | | | |
| Davidson, J., Esq. | | | |
| Begly, Thomas A | Secretary | Aug. 17, 1841 | |
| Keefer. Samuel | Chief Engineer | " 17, 1841 | |
| Rubidge, F.B | Architect and Asst. Chief Engineer | Dec. 15, 1841 | |
| NEW BOARD OF WORKS. | | | |
| Killaly, Hon H. H | Chairman | | |
| Daly, Hon. D. | | | |
| Draper, Hon. W. H | Members | Oct. 4, 1844 | June 8, 1846 |
| Morris, Hon. W | | | |
| Papineau. Hon. D. B | | | |
| *Under Statute 9th Vic., Cap. 37, etc.* | | | |
| Robinson, Hon. W. B | Chief Commissioner | June 12, 1846 | Mar. 10, 1848 |
| Tache, Hon. E. P. | " " | Mar. 11, 1848 | Nov. 26, 1849 |
| Chabot, Hon. J | " " | Dec. 13, 1849 | Mar. 31, 1850 |
| Merritt, Hon. W.H | " " | April 8, 1850 | Feb. 11, 1851 |
| Bourret, Hon. J | " " | Feb. 12, 1851 | Oct. 27, 1851 |
| Young, Hon. John | " " | Oct. 28, 1851 | Sept. 22, 1852 |
| Chabot, Hon. J | " " | Sept. 23, 1852 | Jan. 26, 1855 |
| Lemieux, Hon. F | " " | Jan. 27, 1855 | Nov. 25, 1857 |
| Alleyn, Hon. C. | " " | Nov. 26, 1857 | Aug. 1, 1858 |
| Holton, Hon. L. H | " " | Aug. 2, 1858 | " 6, 1858 |
| Sicotte, Hon. L. V | " " | " 7, 1858 | Jan. 10, 1859 |
| Rose, Hon. John | " " | Jan. 11, 1859 | June 12, 1861 |
| Cauchon, Hon. Joseph | Commissioner | June 13, 1861 | May 23, 1862 |
| Tessier, Hon. U. J | " | May 24, 1862 | May 27, 1863 |
| Drummond, Hon. L. T. | " | " 28, 1863 | July 23, 1863 |
| Laframbroise, Hon. M. | " | July 24, 1863 | Mar. 29, 1864 |
| Chapais, J. C. | " | May 30, 1864 | June 30, 1867 |
| Casgrain, Hon. Charles Eus. | Second Commissioner | July 9, 1846 | Feb. 29, 1848 |
| Cameron, Hon. M. | Assistant Commissioner. | Mar. 11, 1848 | " 1, 1850 |
| Wettenhall, James, Esq | " " | Feb. 2, 1850 | April 16, 1850 |
| Bourret, Hon. Joseph | " " | April 17, 1850 | Feb. 11, 1851 |
| Killaly, Hon. H. H | " " | Feb. 12, 1851 | May 6, 1859 |
| Keefer, Samuel | Deputy Commissioner. | May 6, 1859 | Mar. 7, 1864 |
| Trudeau. Toussaint | " " | Mar. 8, 1864 | May 29, 1868 |
| Begley, Thomas A. | Secretary | Feb. 10, 1841 | Oct. 31, 1857 |
| Trudeau, Toussaint | | Dec. 13, 1859 | Mar. 7, 1864 |
| Braun, Frederick | " | Mar. 8, 1864 | July 1, 1867 |
| Page, John | Chief Engineer | Oct. 31, 1873 | Oct. 1, 1879 |

THE NAMES AND DATES of the appointments, etc., of the principal Officials of the Department of Public Works, from 1841 to 1915—*Concluded.*

| Names. | Capacity or Office. | Date of Appointment. Served. From. | To. |
|---|---|---|---|
| *Under Statute 31 Vic., Cap. 12.* | | | |
| McDougall, Hon. Wm. | Minister | July 1, 1867 | Dec. 7, 1869 |
| Langevin, Hon. Hector L., C.B. | " | Dec. 8, 1869 | Nov. 6, 1873 |
| Mackenzie, Hon. Alexander | " | Nov. 7, 1873 | Oct. 16, 1878 |
| Tupper, Sir Charles, C.B., K.C.M.G. | " | Oct. 17, 1878 | May 19, 1879 |
| Langevin, Sir Hector L., C.B., K.C.M.G. | " | May 20, 1879 | Aug. 11, 1891 |
| Smith, Hon. Frank | Acting Minister | Aug. 14, 1891 | Jan. 10, 1892 |
| Ouimet, Hon. Joseph Alderic | Minister | Jan. 11, 1892 | April 30, 1896 |
| Desjardins, Hon. Alphonse | " | May 1, 1896 | July 12, 1896 |
| Tarte, Hon. J. Israel | " | July 13, 1896 | Oct. 21, 1902 |
| Sutherland, Hon. James | " | Nov. 11, 1902 | May 3, 1905 |
| Hyman, Hon. Charles S. | " | May 22, 1905 | Aug. 29, 1907 |
| Pugsley, Hon. Wm. | " | Aug. 30, 1907 | Oct 12, 1911 |
| Monk, Hon. F. D. | " | Oct. 12, 1911 | Oct. 22, 1912 |
| Rogers, Hon. Robert | " | Oct. 29, 1912 | |
| Trudeau, Toussaint | Deputy Minister | May 29, 1868 | Oct. 1, 1879 |
| Baillarge, G. F. | " | Oct. 4, 1879 | Dec. 31, 1890 |
| Gobeil, A., I.S.O. | " | Jan. 1, 1891 | June 2, 1908 |
| Hunter, James B. | " | July 1, 1908 | |
| St. Laurent, Arthur | Assistant Deputy Minister | " 1, 1908 | |
| Braun, Frederick | Secretary | " 1, 1867 | Sept. 30, 1879 |
| Chapleau, S. | " | Oct. 1, 1879 | Nov. 4 1880 |
| Ennis, F. H. | " | Nov. 5, 1880 | Jan. 13, 1885 |
| Gobeil, A. | " | Jan. 23, 1885 | Dec. 31, 1890 |
| Roy, E. F. E. | " | " 1, 1891 | " 31, 1900 |
| Gelinas, Fred. | " | June 8, 1901 | July 2, 1908 |
| Tessier, Napoleon | " | Aug. 11, 1908 | June 2, 1910 |
| Desrochers, Rodolphe Charles | " | July 1, 1910 | |
| McPherson, D. A. | Assistant Secretary | Jan. 18, 1891 | April 11, 1893 |
| Desrochers, Rodolphe Charles | " " | " 8, 1896 | June 30, 1910 |
| Dillon, R. W. | " " | Dec. 19, 1910 | Mar. 23, 1911 |
| Colman, L. H. | " " | May 23, 1911 | |
| Page, John | Chief Engineer | July 1, 1868 | Oct. 1, 1879 |
| Perley, H. F. | " | Nov. 25, 1880 | July 10, 1891 |
| Coste, Louis | " | July 26, 1892 | Mar. 18, 1899 |
| Lafleur, E. D. | " | Jan. 7, 1905 | |
| Dufresne, A. R. | Assistant Chief Engineer | May 13, 1910 | |
| Scott, Thos. S. | Chief Architect | " 26 1871 | Oct. 30, 1881 |
| Fuller, Thomas | " | Oct. 31, 1881 | June 30, 1897 |
| Ewart, David, I.S.O. | " | Nov. 2, 1897 | Sept. 30, 1914 |
| Horwood, E. L | " | Oct. 1, 1914 | |

# NAMES

OF THE

# Officials Employed on the Slides and Booms of Canada

ON MARCH 31, 1915

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

## OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS.

STATEMENT showing the Names, Dates of Appointment, Salaries, etc., of persons employed on the various Slides and Booms on March 31, 1915.

| Name. | Date of Birth. | Position. | Where employed. | Date of Appointment. | Salary. | Remarks. |
|---|---|---|---|---|---|---|
| *Collector of Public Works Revenue.* | | | | | $ cts. | |
| E. T. Smith | Nov. 26, 1846 | Collector—First Div. Subdivision 'A'. | Ottawa | July 1, 1889 | 3,100 00 a year | Date of first appointment to Crown Timber Office, Ottawa, June 30, 1864. Clerk in Dept. of Inland Revenue, July 1, 1870, to June 30, 1889. Transferred to civil list with rank of first class clerk, January 5, 1892. Chief clerk, July 1, 1906. Subdivision A of 1st Division, 1st April, 1912. |
| J. Brassard | Jan. 9, 1859 | Boatman | " | Mar. 1, 1901 | 70 00 a month. | |
| *Saguenay District.* | | | | | | |
| William Dallaire | Oct. 8, 1857 | Boom master | Chicoutimi | April 1, 1907 | 75 00 " | |
| Jean Boucher | | Asst. boom master | " | " 1, 1912 | 70 00 " | |
| Arm. Onellette | June 15, 1879 | Boom keeper | " | May 1, 1906 | 50 00 " | |
| Willie Dallaire | Dec. 23, 1882 | " | " | " 1 1906 | 60 00 " | |
| N. Duchesne | Jan. 6, 1880 | " | " | April 6, 1908 | 50 00 " | |
| *St. Maurice District.* | | | | | | |
| John Dick | April 7, 1848 | Boom master | Mouth of St. Maurice | May 21, 1898 | 75 00 " | |
| A. Courteau | | " " | " " | | 75 00 " | |
| J. Brousseau | Jan. 3, 1869 | " " | " | Feb. 1, 1912 | 75 00 " | |
| Jos. Page | July 7, 1845 | " " | Cap aux Corneilles | Dec. 10, 1879 | 75 00 " | |
| C. Lymburner | " 21, 1883 | " " | " | Feb. 26, 1912 | 75 00 " | |
| F. Brousseau | Sept. 12, 1865 | " " | " | " 28, 1912 | 75 00 " | |
| P. Gélinas | Jan. 6, 1862 | " " | Les Grès | Mar. 28, 1912 | 75 00 " | |
| S. Bisson | Oct. 17, 1863 | Slide master | Shawinigan Falls | Feb. 1, 1911 | 60 00 " | |
| J. Paquin | " 9, 1864 | Boom master | Grand Mère | Nov. 21, 1911 | 75 00 " | |
| F. C. Boucher | July 24, 1868 | Asst. master | " | July 1, 1912 | 60 00 " | |
| Alp. Doucet | Feb. 14, 1867 | Boom master | Grande Piles | Dec. 2, 1912 | 75 00 " | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Ottawa District.* | | | | | | | | |
| R. F. H. Bruce | June 3rd, 1863 | Superintendent | Ottawa | Feb. 11, 1914 | 2,500 00 | a year | Mr. Bruce entered the service Dec. 14, 1911, as Asst. Engr., on the staff of the Upper Ottawa River storage |
| J. Kent | Jan. 28, 1864 | Accountant* | " | Aug. 1, 1886 | 1,800 00 | " | *Ottawa River Works*: In addition to these officers, etc., there are employed during the running season, one foreman on slide at $2, and one assistant foreman at $1.75 a day; also 25 to 30 labourers at $1.75 to $2 a working day. |
| J. C. Scott | June 27, 1865 | Assist. engineer | " | April 1, 1889 | 2,100 00 | " | |
| S. E. Smith | May 25, 1869 | Clerk | " | Nov. 7, 1904 | 1,300 00 | " | |
| G. H. McKay, Miss | Aug. 16, 1882 | Typewriter | " | Jan. 22, 1914 | 900 00 | " | |
| Wm. Cain | April 22, 1860 | Messenger | " | Jan. 1, 1892 | 800 00 | " | |
| Geo. P. Huguet | Mar. 13, 1883 | Draughtsman | " | July 2, 1905 | 1,400 00 | " | |
| G. R. Nash | Oct. 16, 1882 | " | " | Aug. 25, 1904 | 1,600 00 | " | |
| D. Noonan | June 17, 1840 | Boom master | Gatineau | Mar. 21, 1878 | 750 00 | " | |
| J. Nash | Jan. 13, 1857 | Deputy slide master | Chaudière | Mar. 25, 1913 | 3 00 | a day | |
| L. Cousineau | Dec. 30, 1852 | " " | Hull | Oct. 26, 1911 | 75 00 | a month | |
| Jos. Gaudette | June 24, 1840 | " " | Arnprior | May 17, 1912 | 2 50 | a day | Actively employed about seven months. |
| Joseph McCrea | Mar. 26, 1859 | Boom master | Springtown | May 15, 1880 | 25 00 | a month | |
| Patrick Barry | Mar. 27, 1858 | Deputy slide master | High Falls | Mar. 10, 1888 | 1 50 | a day | Employed four months during season of navigation. Oversees repairs in winter. |
| Duncan McLaren | Jan. 7, 1865 | " " | Portage du Fort | Sept. 7, 1881 | 456 25 | a year | " " |
| N. Rochon | April 2, 1879 | " " | Black River | Mar. 1, 1900 | 480 00 | " | " " |
| H. B. Smith | June 5, 1856 | " " | Lower Petawawa | May 13, 1912 | 2 00 | a day | " " |
| F. Chamberlin | | " " | Upper Petawawa | April 11, 1914 | 2 00 | " | " " |
| Wm. Thomson | May 3, 1843 | " " | Mountain | Sept. 2, 1879 | 1 25 | " | " 6 months " |
| S. Moorhead | May 3, 1861 | " " | Calumet | Mar. 1, 1901 | 1 25 | " | " 6 to 7 months " |
| John Mullin | July 27, 1861 | " " | Coulonge | April 10, 1899 | 2 00 | " | " 4 months " |
| Thos. Tait | Nov. 13, 1887 | " " | Dumoine | April 20, 1912 | 2 00 | " | Employed three months during the season of navigation. Will inspect works when required. |
| Jas. Carey | July 6, 1850 | In charge | Cedar Lake Dam | April 1, 1901 | 2 00 | " | |
| T. McAnulty | June 5, 1857 | Deputy slide master | Crooked Chute | May 14, 1912 | 2 00 | " | |
| A. H. Johnson | Nov. 28, 1839 | " | Chenaux | ——— | 1865 | 3 00 | " | Paid during season of navigation, seven months. |
| *Newcastle District.* | | | | | | | | |
| Thos. Austin | June 5, 1857 | Slide Master | Fenelon Falls | Jan. 1, 1912 | 100 00 | a year | Receive $540 a year as lock master from Department of Railways and Canals. |
| Israel Church | | " " | Burleigh | May 1, 1912 | 100 00 | " | " " " |
| *Richelieu District.* | | | | | | | | |
| N. Menard | | Boom master | Beloeil Station | May 21, 1908 | 100 00 | " | |
| *Burlington Channel Swing Bridge.* | | | | | | | | |
| Robert Lutz | Mar. 23, 1864 | Bridge attendant | Burlington | April 1, 1912 | 70 00 | a month | |
| N. Carey | April 30, 1875 | Bridge assistant | " | June 1, 1912 | 2 00 | a day | Employed nine months. |
| J. J. Fulton | May 3, 1881 | " " | " | Mar. 1, 1913 | 2 00 | " | " " " |

* Appointed Accountant and Paymaster, October 4, 1904.

## LOCKS, ETC., EMPLOYEES.

STATEMENT showing the Names, Dates of Appointment, Salaries, etc.

| Name. | Date of Birth. | Position. | Where employed. | Date of Appointment. | Salary. | Remarks. |
|---|---|---|---|---|---|---|
| *Yamaska Lock.* | | | | | $ cts. | |
| M. Lemaire | Dec. 8, 1867 | Lock keeper | Yamaska | Jan 1, 1914 | 75 00 a month | Employed nine months. |
| H. Lambert | Aug. 20, 1844 | " | " | July 1, 1897 | 50 00 " | " " " |
| *Rivière du Lièvre Lock.* | | | | | | |
| O. Laframboise | | Lock master | Rivière du Lièvre | May 1. 1912 | 65 00 " | |
| D. Lauzon | June 1, 1886 | Labourer | " | April 5, 1914 | 60 00 " | Employed eight months. |
| *St. Andrew's Rapids Lock and dam.* | | | | | | |
| S. Coppleman | | Superintendent | Red River, Man | Feb. 24, 1915 | 1,800 00 | |
| H. B. Johnston | July 1871 | Asst. superintendent | " | April 1, 1910 | 1,200 00 | |
| N. Ross | " 4, 1882 | Electrician | " | Jan. 1, 1912 | 1,100 00 | |
| C. Johnston | " 6, 1882 | Machinist | " | June 23, 1913 | 1,000 00 | |
| A. J. Sanders | Mar. 17, 1880 | Lockman | " | May 3, 1912 | 755 00 | |
| A. Tilder | Oct. 9, 1854 | " | " | May 3, 1912 | 755 00 | |
| John Sanders | Feb. 21, 1867 | " | " | Aug. 12, 1912 | 755 00 | |
| James Swain | Mar. 15, 1890 | " | " | June 23, 1913 | 755 00 | |

JOS. VINCENT.

# NAMES

OF

# PERSONS EMPLOYED IN THE VARIOUS GRAVING DOCKS

## ON MARCH 31, 1915

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

## GRAVING DOCK EMPLOYEES.

STATEMENT showing the Names, Dates of Appointment, Salaries, etc., of persons employed on the various Graving Docks, March 31, 1915.

| Name. | Employed. | Where employed. | Date of Appointment. | Salary. | Remarks. |
|---|---|---|---|---|---|
| *Esquimalt Graving Dock, British Columbia.* | | | | $ cts. | |
| J. A. Gould | Dockmaster | Esquimalt | June 20, 1906 | 165 00 a month | |
| John E. Jeffcott | Engineer | " | Jan. 4, 1901 | 132 00 " | |
| F. N. Jones | Assistant engineer | " | Jan. 8, 1901 | 100 00 " | |
| A. D. Grieve | Carpenter | " | Dec. 1, 1878 | 126 50 " | |
| J. Young | Fireman | " | June 1, 1903 | 77 00 " | |
| J. Appleby | " | " | July 1, 1909 | 77 00 " | |
| J. Stock | Watchman | " | " 2, 1894 | 71 50 " | |
| Joseph Ball | Labourer | " | | 77 00 " | |
| John Beatty | Night watchman | " | | 71 50 " | |
| James Isbester | Watchman | " | July 24, 1909 | 71 50 " | |
| *Levis Graving Dock.* | | | | | |
| Alf. Samson | Dockmaster | Levis | Feb. 15, 1900 | 1,800 00 a year | |
| W. McDougall | Mechanical engineer | " | June 1, 1888 | 90 00 a month | |
| T. Després | Asst. mechanical engineer | " | July 21, 1901 | 83 33 " | |
| Casimir Bourassa | Fireman | " | Feb. 15, 1907 | 65 00 " | |
| *Kingston Graving Dock.* | | | | | |
| Dock leased May 1, 1910 for a period of 21 years to the Kingston Dry Dock and Shipbuilding Company, Limited—W. J. Fair, secretary. | | | | | |

JOS. VINCENT.

# NAMES

OF

# ENGINEERS, ENGINEMEN, FIREMEN AND CARETAKERS

EMPLOYED ON THE

**PUBLIC BUILDINGS THROUGHOUT THE DOMINION ON MARCH 31, 1915**

DATES OF APPOINTMENT, SALARIES, ETC.

## ENGINEERS AND CARETAKERS, PUBLIC BUILDINGS.

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1915.

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Amherst..... N.S. | Public building..... | J. H. Chapman..... | Jan. 3, 1846 | Caretaker .... | Sept. 1, 1901 | 33 33 | 12 months .... | 400 00 |
| Annapolis..... " | " ..... | John McKay..... | Oct. 26, 1847 | " ..... | April 1, 1891 | 33 33 | 12 " .... | 400 00 |
| Antigonish..... " | " ..... | A. Beaton..... | May 8, 1848 | " ..... | " 10, 1914 | 33 33 | 12 " .... | 400 00 |
| Arichat..... " | " ..... | Mrs. A. DeRooch..... | June 30, 1868 | " ..... | May 5, 1905 | 12 50 | 12 " .... | 150 00 |
| Baddeck..... " | " ..... | D. Munro..... | May 1, 1845 | " ..... | July 1, 1912 | 33 33 | 12 " .... | 400 00 |
| Bridgewater..... " | " ..... | Thos. Cohoon..... | Jan. 9, 1853 | " ..... | Jan. 19, 1909 | 33 33 | 12 " .... | 400 00 |
| Canso..... " | " ..... | G. A. Pyche ..... | June 17, 1865 | " ..... | Dec. 8, 1911 | 33 33 | 12 " .... | 400 00 |
| Dartmouth..... " | " ..... | I. C. Henley..... | Dec. 11, 1846 | " ..... | May 22, 1894 | 37 50 | 12 " .... | 450 00 |
| Digby..... " | " ..... | Wm. Caines ..... | May 5, 1860 | " ..... | " 18, 1914 | 33 33 | 12 " .... | 400 00 |
| Glace Bay ..... " | " ..... | J. McDonald ..... | Jan. 17, 1886 | " ..... | July 1, 1914 | 50 00 | 12 " .... | 600 00 |
| Digby..... " | " ..... | F. Denison..... | Nov. 8, 1841 | " ..... | Mar. 14, 1902 | 33 33 | 12 " .... | 400 00 |
| Glace Bay ..... " | " ..... | Mrs. J. A. Currie..... | June 29, 1865 | " ..... | Dec. 20, 1909 | 50 00 | 12 " .... | 600 00 |
| Guysborough..... " | " ..... | Mrs. L. Hadley ..... | Dec. 27, 1860 | Act'g. caretaker. | Mar. 31, 1911 | 10 00 | 12 " .... | 120 00 |
| Halifax..... " | Ex-warehouse ..... | Martin O'Neil..... | " 30, 1850 | Caretaker ..... | Oct. 1, 1897 | 54 16 | 12 " .... | 650 00 |
| " ..... " | Dom. building..... | Richard Power..... | Aug. 15, 1834 | Engineer..... | " 1, 1871 | 62 50 | 12 " .... | 750 00 |
| " ..... " | " ..... | J. DeYoung ..... | Dec. 8, 1860 | Fireman ..... | Nov. 28, 1904 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | J. Handley ..... | Aug. 10, 1855 | Asst. fireman.. | Mar. 1, 1912 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | L. W. Anderson.. | Nov. 17, 1850 | Elevatorman.... | Oct. 31, 1910 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | L. Umlah..... | Dec. 12, 1885 | " ..... | Aug. 1, 1912 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | John Hennessey..... | July 20, 1864 | Watchman..... | Oct. 1, 1913 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | J. F. Sullivan..... | April 9, 1866 | Caretaker .... | July 1, 1872 | 50 00 | 12 " .... | 600 00 |
| " ..... " | Custom house..... | Geo. Crockford..... | June 19, 1853 | Cleaner..... | " 7, 1910 | 50 00 | 12 " .... | 600 00 |
| " ..... " | " ..... | F. Warner..... | Oct. 8, 1860 | Fireman ..... | May 1, 1907 | 41 66 | 12 " .... | 500 00 |
| " ..... " | " ..... | J. Barnes..... | Dec. 3, 1851 | Engineer ..... | Jan. 28, 1907 | 64 16 | 12 " .... | 770 00 |
| " ..... " | " ..... | P. L. Nickerson..... | Mar. 4, 1887 | Elevatorman.... | Feb. 6, 1911 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | G. Selig..... | April 21, 1847 | Fireman. ..... | April 26, 1907 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | John Oxley..... | " 17, 1854 | " ..... | Feb. 2, 1897 | 64 16 | 12 " .... | 770 00 |
| " ..... " | " ..... | J. Brennan..... | Oct. 22, 1858 | Asst. caretaker . | " 1, 1913 | 54 16 | 12 " .... | 650 00 |
| Inverness..... " | Public building..... | J. A. McDonald..... | July 1, 1878 | Caretaker .... | Dec. 1, 1911 | 33 33 | 12 " .... | 400 00 |
| Kentville ..... " | " ..... | W. Hiltz..... | April 30, 1864 | " ..... | Nov. 14, 1900 | 33 33 | 12 " .... | 400 00 |
| Lunenburg..... " | " ..... | C. Dauphine..... | Mar. 19, 1867 | " ..... | July 1, 1912 | 33 33 | 12 " .... | 400 00 |
| Liverpool..... " | " ..... | James Clements..... | June 5, 1835 | " ..... | June 27, 1900 | 33 33 | 12 " .... | 400 00 |
| New Glasgow. ..... " | " ..... | K. Forbes ..... | " 11, 1851 | " ..... | Dec. 1, 1910 | 37 50 | 12 " .... | 450 00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| North Sydney | N.S. | Public Building | H. D. McMillan | Nov. | 16, | 1865 | Caretaker | Mar. | 11, | 1911 | 37 50 | 12 months | 450 00 |
| Parrsboro' | " | " | N. Phinney | Dec. | 22, | 1862 | " | Aug. | 27, | 1913 | 35 33 | 12 " | 400 00 |
| Pictou | " | " | N. Roach | Oct. | 15, | 1839 | " | " | 27, | 1912 | 25 00 | 12 " | 300 00 |
| " | " | Custom house | F. J. Cole | May | 8, | 1848 | " | Aug. | 27, | 1912 | 25 00 | 12 " | 300 00 |
| Shelburne | " | Public building | H. Swensburg | July | 7, | 1844 | " | Feb. | 17, | 1911 | 33 33 | 12 " | 400 00 |
| Springhill | " | " | J. A. Watt | Sept. | 5, | 1849 | " | Dec. | 1, | 1903 | 37 50 | 12 " | 450 00 |
| Sydney | " | " | Mrs. M. Keefe | Jan. | 4, | 1850 | " | Jan. | 13, | 1903 | 38 33 | 12 " | 460 00 |
| Sydney Mines | " | " | R. Way | May | 20, | 1888 | " | Aug. | 1, | 1913 | 37 50 | 12 " | 450 00 |
| Truro | " | Post Office | Jas. McLean | Oct. | 25, | 1854 | " | Oct. | 19, | 1914 | 41 66 | 12 " | 500 00 |
| Westville | " | Public building | M. Conners | Nov. | 5, | 1855 | " | April | 1, | 1912 | 33 33 | 12 " | 400 00 |
| Windsor | " | Post Office | J. A. Mosher | Nov. | 16, | 1841 | " | Feb. | 13, | 1899 | 41 66 | 12 " | 500 00 |
| Yarmouth | " | Public building | W. H. Whelan | Dec. | 23, | 1841 | " | Mar. | 1, | 1900 | 33 33 | 12 " | 400 00 |
| Charlottetown | P.E.I. | Old bank building | Ed. Flynn | Mar. | 16, | 1856 | " | Oct. | 1, | 1911 | 50 00 | 12 " | 600 00 |
| " | " | Dom. building | A. Mackenzie | May | 12, | 1856 | " | Nov. | 1, | 1896 | 58 33 | 12 " | 700 00 |
| " | " | " | E. Cameron | Nov. | 2, | 1853 | Messenger | Nov. | 15, | 1906 | 41 66 | 12 " | 500 00 |
| " | " | " | J. Savidant | June | 19, | 1869 | Asst. caretaker | Dec. | 8, | 1912 | 50 00 | 12 " | 600 00 |
| " | " | " | M. A. Allan | Aug. | 1, | 1855 | " | Jan. | 24, | 1898 | 50 00 | 12 " | 600 00 |
| Georgetown | " | Public building | A. D. McLennan, P.M. | July | 22, | 1873 | Caretaker | Sept. | 1, | 1913 | 10 00 | 12 " | 120 00 |
| Montague | " | " | H. L. Peardon | April | 13, | 1885 | " | Aug. | 27, | 1906 | 13 33 | 12 " | 160 00 |
| Summerside | " | " | A. McCormack | Aug. | 5, | 1851 | " | Feb. | 14, | 1913 | 33 33 | 12 " | 400 00 |
| Souris | " | " | R. F. St. John | June | 27, | 1873 | " | June | 17, | 1912 | 33 33 | 12 " | 400 00 |
| Tignish | " | " | J. W. Chiasson | Feb. | 14, | 1861 | " | Mar. | 28, | 1913 | 33 33 | 12 " | 400 00 |
| Bathurst | N.B. | " | J. H. Doucet | July | 16, | 1846 | " | Mar. | 26, | 1906 | 33 33 | 12 " | 400 00 |
| Campbellton | " | " | C. Watson | July | 15, | 1855 | " | Mar. | 1, | 1912 | 33 33 | 12 " | 400 00 |
| Carleton, St. John | " | " | Mme J. C. Leonard | April | 11, | 1859 | Acting caretaker | Sept. | 15, | 1908 | 33 33 | 12 " | 400 00 |
| Chatham | " | " | C. Johnson | May | 18, | 1856 | Caretaker | Mar. | 27, | 1895 | 25 00 | 12 " | 300 00 |
| Dalhousie | " | " | Wm Gould | Jan. | 1, | 1853 | " | Nov. | 26, | 1890 | 33 33 | 12 " | 400 00 |
| Fairville | " | " | Alex. Scott | April | 18, | 1873 | " | Feb. | 3, | 1913 | 33 33 | 12 " | 400 00 |
| Fredericton | " | " | Ludlow Yerxa | Dec. | 18, | 1843 | " | July | 1, | 1909 | 41 66 | 12 " | 500 00 |
| Grand Falls | " | " | J. R. Graham | Nov. | 18, | 1840 | " | Aug. | 30, | 1912 | 33 33 | 12 " | 400 00 |
| Hartland | " | " | J. W. Adams | Feb. | 10, | 1847 | " | June | 11, | 1912 | 41 66 | 12 " | 500 00 |
| Hillsborough | " | " | R. Slater | Mar. | 17, | 1849 | " | Dec. | 2, | 1912 | 33 33 | 12 " | 400 00 |
| Marysville | " | " | Jas. Inch, P.M. | Sept. | 10, | 1850 | " | May | 31, | 1912 | 12 50 | 12 " | 150 00 |
| Milltown | " | " | C. M. McBeans | June | 22, | 1860 | " | Dec. | 24, | 1914 | 33 33 | 12 " | 400 00 |
| Moncton | " | " | E. B. Hicks | Jan. | 11, | 1832 | " | Jan. | 11, | 1886 | 37 50 | 12 " | 450 00 |
| Newcastle | " | " | Patrick Keating | Mar. | 13, | 1840 | " | Oct. | 23, | 1886 | 41 66 | 12 " | 500 00 |
| Ossekeag | " | " | G. H. Barnes | Sept. | 29, | 1849 | " | Oct. | 19, | 1914 | 33 33 | 12 " | 400 00 |
| Richibucto | " | " | G. Holleran | Sept. | 19, | 1863 | " | April | 5, | 1901 | 33 33 | 12 " | 400 00 |
| Sussex | " | " | T. Goggan | Mar. | 23, | 1851 | " | Mar. | 7, | 1913 | 33 33 | 12 " | 400 00 |
| St. John | " | Custom house | N. J. Morrison | July | 25, | 1858 | Engr. and caretaker | May | 1, | 1894 | 70 00 | 12 " | 840 00 |
| " | " | " | Christopher White | Nov. | 20, | 1844 | Caretaker | Nov. | 9, | 1885 | 60 00 | 12 " | 720 00 |
| " | " | " | J. T. Logan | Sept. | 1, | 1882 | Asst. Fireman | Dec. | 23, | 1908 | 60 00 | 12 " | 720 00 |
| " | " | " | James A. Paul | Aug. | 1, | 1837 | Messenger | Oct. | 13, | 1891 | 58 33 | 12 " | 700 00 |
| " | " | " | D. McKellar | June | 4, | 1855 | Elev. man | Feb. | 27, | 1914 | 60 00 | 12 " | 720 00 |
| " | " | Post Office | James Wolfe | Mar. | 10, | 1850 | Engineer | Dec. | 1, | 1893 | 65 00 | 12 " | 780 00 |
| " | " | " | Edward Haney | Feb. | 22, | 1849 | Elev. man | Nov. | 27, | 1882 | 60 00 | 12 " | 720 00 |
| " | " | " | John Killen | June | 9, | 1857 | Caretaker | Mar | 4, | 1912 | 50 00 | 12 " | 600 00 |
| " | " | " | H. R. Garrity | Sept. | 6, | 1877 | Asst. caretaker | Mar. | 16, | 1910 | 40 00 | 12 " | 480 00 |
| " | " | Detention building | R. Stackhouse | Oct. | 13, | 1851 | Watchman | Nov. | 15, | 1911 | $2 p. d. | 12 " | 730 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1915 — *Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| St. John ..... N.B. | Immigration building..... | F. Haslam..... | Dec. 30, 1876 | Watchman..... | Jan. 29, 1903 | 60 00 | 12 months .... | 720 00 |
| " ..... " | " ..... | Jos. Sleeth..... | Oct. 3, 1872 | " ..... | Sept. 1902 | 60 00 | 12 " .... | 720 00 |
| " ..... " | Quarantine station..... | Fred Hargrave..... | April 25, 1871 | Caretaker..... | Dec. 29, 1904 | 60 00 | 12 " .... | 720 00 |
| St. Stephen..... " | Public building..... | W. Evans..... | Mar. 10, 1859 | " ..... | Jan. 1, 1913 | 45 83 | 12 " .... | 550 00 |
| Tracadie ..... " | Lazaretto ..... | P. Arseneault..... | May 19, 1869 | Firemen..... | Dec. 24, 1908 | 45 00 | 12 " .... | 540 00 |
| " ..... " | " ..... | A. Arseneau..... | May 3, 1883 | " ..... | Oct. 9, 1912 | 35 00 | 12 " .... | 420 00 |
| Woodstock..... " | Public building..... | W. Hay..... | Nov. 15, 1844 | Caretaker..... | Feb. 17, 1911 | 37 50 | 12 " .... | 450 00 |
| Arthabaska..... P.Q. | " ..... | Dr. E. O. Belleau..... | Sept. 1, 1856 | " ..... | Nov. 22, 1911 | 33 33 | 12 " .... | 400 00 |
| Aylmer..... " | " ..... | L. Chartier..... | Aug. 23, 1860 | " ..... | June 4, 1912 | 8 33 | 12 " .... | 100 00 |
| Acton Vale..... " | " ..... | F. X. Beauregard..... | April 9, 1847 | " ..... | Nov. 1, 1911 | 41 66 | 12 " .... | 500 00 |
| Berthierville..... " | " ..... | J. A. Rocray..... | May 24, 1893 | " ..... | May 7, 1912 | 6 25 | 12 " .... | 75 00 |
| Buckingham ..... " | " ..... | T. F. Bisson, P.M..... | May 23, 1848 | " ..... | Feb. 3, 1903 | 16 66 | 12 " .... | 200 00 |
| Chicoutimi ..... " | " ..... | G. A. Blais..... | Sept. 24, 1870 | " ..... | Dec. 4, 1907 | 45 83 | 12 " .... | 550 00 |
| Coaticook..... " | " ..... | I. Baldwin..... | Nov. 16, 1830 | " ..... | June 27, 1889 | 41 66 | 12 " .... | 500 00 |
| Cookshire..... " | " ..... | S. Wright..... | June 25, 1856 | " ..... | Feb. 4, 1909 | 33 33 | 12 " .... | 400 00 |
| Drummondville..... " | " ..... | S. Montplaisir..... | Feb. 22, 1855 | " ..... | June 15, 1914 | 33 33 | 12 " .... | 400 00 |
| Farnham (West)..... " | " ..... | J. Belanger..... | Jan. 19, 1847 | " ..... | Jan. 30, 1906 | 25 00 | 12 " .... | 300 00 |
| Fraserville ..... " | " ..... | E. Dube..... | Nov. 11, 1847 | " ..... | May 12, 1911 | 33 33 | 12 " .... | 400 00 |
| Granby..... " | " ..... | Wm. Bourgeois..... | Nov. 17, 1877 | " ..... | Jan. 1, 1912 | 25 00 | 12 " .... | 300 00 |
| Hull ..... " | Post Office..... | T. J. Madore, P.M..... | Dec. 1, 1843 | " ..... | Mar. 8, 1900 | 12 50 | 12 " .... | 150 00 |
| Iberville. ..... " | " ..... | A. Courtois..... | Jan. 20, 1869 | " ..... | May 7, 1907 | 40 00 | 12 " .... | 480 00 |
| Joliette..... " | Public building..... | Adolphe Ratel..... | Dec. 29, 1845 | " ..... | Sept. 1, 1897 | 41 66 | 12 " .... | 500 00 |
| Knowlton..... " | " ..... | L. H. Pibus, P.M ..... | April 22, 1875 | " ..... | May 1, 1912 | 12 50 | 12 " .... | 150 00 |
| Lachine..... " | " ..... | O. P. Robert, P.M..... | Sept. 7, 1846 | " ..... | Jan. 26, 1899 | 8 33 | 12 " .... | 100 00 |
| Lachute..... " | " ..... | D. Joss..... | Oct. 10, 1857 | " ..... | April 28, 1909 | 33 33 | 12 " .... | 400 00 |
| Laprairie..... " | " ..... | Jos. Bisson, P.M..... | Nov. 11, 1866 | " ..... | Nov. 22, 1901 | 12 50 | 12 " .... | 150 00 |
| Lévis..... " | " ..... | C. Lamontagne..... | Dec. 28, 1848 | " ..... | Mar. 17, 1908 | 35 41 | 12 " .... | 425 00 |
| Longueuil..... " | " ..... | E. H. Lamarre..... | April 28, 1839 | " ..... | Dec. 13, 1911 | 37 50 | 12 " .... | 450 00 |
| L'Assomption. ..... " | " ..... | A. Martel ..... | Dec. 8, 1860 | " ..... | Nov. 18, 1911 | 25 00 | 12 " .... | 300 00 |
| Louiseville..... " | " ..... | G. Lafontaine..... | Feb. 1, 1857 | " ..... | Aug. 11, 1914 | 33 33 | 12 " .... | 400 00 |
| Magog..... " | " ..... | J. Dearsley..... | Dec. 6, 1881 | " ..... | Feb. 1, 1914 | 33 33 | 12 " .... | 400 00 |
| Marieville ..... " | " ..... | P. Prairie ..... | Nov. 17, 1883 | " ..... | Nov. 13, 1912 | 25 00 | 12 " .... | 300 00 |
| Matane..... " | " ..... | L. Ganthier ..... | July 11, 1864 | " ..... | Dec. 29, 1914 | 33 33 | 12 " .... | 400 00 |
| Megantic..... " | " ..... | S. Brousseau ..... | Sept. 25, 1842 | " ..... | Feb. 15, 1912 | 33 33 | 12 " .... | 400 00 |
| Montmagny..... " | " ..... | H. Courteau ..... | Feb. 21, 1861 | " ..... | July 1, 1912 | 33 33 | 12 " .... | 400 00 |
| Montreal..... " | Custom house ..... | C. Daudelin..... | June 19, 1843 | " ..... | July 16, 1892 | 41 66 | 12 " .... | 500 00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montreal | P. Q. | Custom house | C. Girard | Aug. 11, | 1844 | Cleaner | Oct. 28, | 1910 | 55 00 | 12 months | | 660 00 |
| " | " | " | F. X. Bernier | May 24, | 1852 | " | Oct. 28, | 1910 | 55 00 | 12 " | | 660 00 |
| " | " | " | A. Clairmont | May 8, | 1865 | " | Dec. 1, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | A. Cousineau | June 26, | 1862 | " | April 15, | 1912 | 50 0 | 12 " | | 600 00 |
| " | " | " | B. Lajennesse | Nov. 20, | 18 2 | Fireman | Nov. 23, | 1896 | 65 00 | 12 " | | 780 00 |
| " | " | " | H. Provencher | Sept. 5, | 1878 | " night | May 1, | 1913 | 65 00 | 12 " | | 780 00 |
| " | " | " | A. Tremblay | April 17, | 1888 | Plumber | Mar. 23, | 1912 | 60 00 | 12 " | | 720 00 |
| " | " | Examining warehouse | J. Forgues | May 15, | 1874 | Engineer | Nov. 2, | 1904 | 70 00 | 12 " | | 840 00 |
| " | " | " | A. Tremblay | April 12, | 1862 | Fireman | Nov. 1, | 1906 | 60 00 | 12 " | | 720 00 |
| " | " | " | P. Prudhomme | Mar. 7, | 1854 | P. elev. attend | Mar. 19, | 1906 | 60 00 | 12 " | | 720 00 |
| " | " | " | S. McGarry | June 15, | 1873 | Frt. elev. attend. | Jan. 12, | 1904 | 60 00 | 12 " | | 720 00 |
| " | " | " | H. Marchand | Mar. 15, | 1856 | " | Oct. 18, | 1904 | 60 0 | 12 " | | 720 00 |
| " | " | " | J. Neville | Mar. 18, | 1870 | " | Sept. 29, | 1904 | 60 00 | 12 " | | 720 00 |
| " | " | " | A. Drouin | June 14, | 1868 | " | Nov. 28, | 1904 | 60 00 | 12 " | | 720 00 |
| " | " | " | A. Barrette | Aug. 28, | 1873 | " | July 21, | 1908 | 60 00 | 12 " | | 720 00 |
| " | " | " | A. Bourassa | June 1, | 1857 | " | Aug. 4, | 1893 | 60 00 | 12 " | | 720 00 |
| " | " | " | A. Lincourt | Jan. 20, | 1869 | " | Jan. 26, | 1915 | 60 00 | 12 " | | 720 00 |
| " | " | " | J. Larocque | Nov. 25, | 1856 | Cleaner | Feb. 1, | 1912 | 55 00 | 12 " | | 660 00 |
| " | " | " | S. Lanctot | June 28, | 1850 | " | Nov. 23, | 1905 | 55 00 | 12 " | | 660 00 |
| " | " | " | J. B. Desjardins | Jan. 21, | 1858 | " | Jan. 26, | 1907 | 55 00 | 12 " | | 660 00 |
| " | " | " | U. Paquette | Oct. 13, | 1866 | " | June 1, | 1909 | 55 00 | 12 " | | 660 00 |
| " | " | " | J. Brunette | Oct. 16, | 1864 | " | Sept. 19, | 1912 | 55 00 | 12 " | | 660 00 |
| " | " | " | H. Valiquette | Dec. 30, | 1871 | Carpenter | Feb. 1, | 1903 | 70 00 | 12 " | | 840 00 |
| " | " | " | A. Poirier | June 18, | 1870 | " | Oct. 15, | 1908 | 65 00 | 12 " | | 780 00 |
| " | " | " | A. Nuttall | Feb. 15, | 1872 | Electrician | June 1, | 1905 | 65 00 | 12 " | | 780 00 |
| " | " | Inland Revenue | Ls. St. Jean | Sept. 17, | 1840 | Fireman | Dec. 1, | 1892 | 60 00 | 12 " | | 720 00 |
| " | " | " | M. O'Donnell | Sept. 13, | 1863 | Caretaker | May 17, | 1912 | 20 00 | 12 " | | 240 00 |
| " | " | Dominion buildings | A. Morrison | Aug. 15, | 1878 | Insp. electricity | April 3, | 1913 | 125 00 | 12 " | | 1,500 00 |
| " | " | Gen'l. P. Office | D. Brown | Jan. 16, | 1861 | Chief engineer | June 13, | 1912 | 108 33 | 12 " | | 1,300 00 |
| " | " | " | I. Trudeau | Jan. 22, | 1963 | Caretaker | Oct. 1, | 1902 | 95 00 | 12 " | | 1,140 00 |
| " | " | " | A. Langevin | Mar. 10, | 1850 | Fireman | Oct. 18, | 1914 | 60 00 | 12 " | | 720 00 |
| " | " | " | T. Gauthier | July 10, | 1865 | Cleaner | Jan. 14, | 1908 | 55 00 | 12 " | | 660 00 |
| " | " | " | P. Germain | Feb. 4, | 1854 | " | Jan. 15, | 19 2 | 50 00 | 12 " | | 600 00 |
| " | " | " | T. Cloutier | Feb. 3, | 1853 | " | Aug. 26, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | D Decary | Aug. 4, | 1875 | " | Aug. 2, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | E. Thompson | Oct. 26, | 1868 | " | Mar. 1, | 1913 | 50 00 | 12 " | | 600 00 |
| " | " | " | F. Labelle | Nov. 13, | 1853 | " | Nov. 1, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | A. Dechesne | Nov. 18, | 1849 | " | Nov. 3, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | H. Martin | July 1, | 1873 | " | Jan. 9, | 1911 | 55 00 | 12 " | | 660 00 |
| " | " | " | A. Bastien | Nov. 1, | 1862 | " | Dec. 20, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | J. P. Murphy | Dec. 18, | 1852 | " | May 19, | 1907 | 50 00 | 12 " | | 600 00 |
| " | " | " | C. Lauzon | Dec. 11, | 1860 | " | Feb. 28, | 1913 | 50 00 | 12 " | | 600 00 |
| " | " | " | J. Davidson | Oct. 11, | 1865 | " | May 3, | 1913 | 50 00 | 12 " | | 600 00 |
| " | " | " | A. M. Olivier | Jan. 10, | 1878 | " | Sept. 10, | 1913 | 50 00 | 12 " | | 600 00 |
| " | " | " | A. Gaingnery | June 19, | 1863 | " | Oct. 1, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | W. Page | Mar. 4, | 1861 | " | Nov. —, | 1908 | 50 00 | 12 " | | 600 00 |
| " | " | " | C. Rochon | Jan. 18, | 1850 | " | Jan. 17, | 1906 | 50 00 | 12 " | | 600 00 |
| " | " | " | Ed. Baudette | Mar. 26, | 1857 | " | Oct. 18, | 1904 | 50 00 | 12 " | | 600 00 |
| " | " | " | H Montigny | April 30, | 1867 | " | Sept. 16, | 1912 | 50 00 | 12 " | | 600 00 |
| " | " | " | J. Lauzon | May 5, | 1858 | " | Feb. 2, | 1912 | 50 00 | 12 " | | 600 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchman employed at Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time Employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Montreal P.Q. | Gen'l. P. Office | M. Paré | May 7, 1889 | Cleaner | Oct. 1, 1911 | 50 00 | 12 months | 600 00 |
| " " | " | Wm. J. Boots | April 14, 1880 | " | Feb. 6, 1912 | 50 00 | 12 " | 600 00 |
| " " | " | J. Laplante | Mar. 12, 1856 | " | Dec. 12, 1907 | 50 00 | 12 " | 600 00 |
| " " | " | L. Belanger | Mar. 31, 1863 | " | May 13, 1912 | 50 00 | 12 " | 600 00 |
| " " | " | P. Roy | Aug. 10, 1887 | " | July 14, 1907 | 55 00 | 12 " | 660 00 |
| " " | " | J. Ouimet | Mar. 15, 1872 | " | Feb. 1, 1913 | 50 00 | 12 " | 600 00 |
| " " | " | H. St. Pierre | Oct. 25, 1849 | " | Mar. 3, 1913 | 50 00 | 12 " | 600 00 |
| " " | " | H. Deslauriers | Jan. 9, 1842 | " | Feb. 7, 1913 | 50 00 | 12 " | 600 00 |
| " " | " | E. Provost | Aug. 21, 1854 | " | Mar. 18, 1913 | 50 00 | 12 " | 600 00 |
| " " | " | L. Prudhomme | June, 27, 1883 | " | Feb. 14, 1912 | 50 00 | 12 " | 600 00 |
| " " | " | L. Jasmin | Sept. 25, 1844 | " | Jan. 9, 1912 | 50 00 | 12 " | 600 00 |
| " " | " | M. Loranger | June 27, 1864 | " | May 13, 1912 | 50 00 | 12 " | 600 00 |
| " " | " | W. J. Tremblay | May 22, 1879 | " | Dec. 1, 1911 | 55 00 | 12 " | 660 00 |
| " " | " | D. Boyer, Mrs. | July 30, 1843 | Charwoman | June 1, 1887 | 28 00 | 12 " | 336 00 |
| " " | " | A. Crochetière, Mrs. | Sept. 29, 1859 | " | Nov. 1, 1897 | 28 00 | 12 " | 336 00 |
| " " | " | V. Laverdure, Mrs. | June 16, 1859 | " | Nov. 12, 1912 | 28 00 | 12 " | 336 00 |
| " " | " | L. D. Thibault | Jan. 28, 1861 | Electrician | Dec. 15, 1905 | 70 00 | 12 " | 840 00 |
| " " | " | F. X. Lefebvre | Dec. 13, 1859 | " | June 28, 1906 | 70 00 | 12 " | 840 00 |
| " " | " | Osias Renaud | June 14, 1869 | " | Feb. 2, 1907 | 70 00 | 12 " | 840 00 |
| " " | " | G. Fauteux | Feb. 11, 1879 | " | Feb. 1, 1913 | 65 00 | 12 " | 780 00 |
| " " | " | G. Flannigan | May 23, 1859 | " | Aug. 13, 1901 | 65 00 | 12 " | 780 00 |
| " " | " | E. Malette | April 22, 1866 | " | Dec. 18, 1914 | 65 00 | 12 " | 780 00 |
| " " | " | J. J. Davis | June 3, 1878 | " | Oct. 27, 1914 | 65 00 | 12 " | 780 00 |
| " " | " | P. Liston | Sept. 10, 1879 | " | May 2, 1914 | 70 00 | 12 " | 840 00 |
| " " | " | J. Conway | Mar. 27, 1874 | " | Mar. 14, 1914 | 65 00 | 12 " | 780 00 |
| " " | " | J. Donaven | Aug. 7, 1841 | Machinist | Mar. 29, 1913 | 60 00 | 12 " | 720 00 |
| " " | " | M. Wickhan | Feb. 7, 1877 | Elevator man | Feb. 14, 1912 | 60 00 | 12 " | 720 00 |
| " " | " | F. Rochon | Mar. 5, 1869 | P. elev. attend | June, 14, 1912 | 60 00 | 12 " | 720 00 |
| " " | " | Oscar Renaud | Feb. 19, 1862 | " | Sept. 10, 1898 | 60 00 | 12 " | 720 00 |
| " " | " | S. Trudeau | Oct. 14, 1855 | " | Feb. 23, 1913 | 60 00 | 12 " | 720 00 |
| " " | " | O. Chaput | Aug. 28, 1854 | " | Nov. 1, 1909 | 60 00 | 12 " | 720 00 |
| " " | " | O. de Ladurantaye | June 29, 1852 | " | April 26, 1906 | 60 00 | 12 " | 720 00 |
| " " | " | J. Cantin | Feb. 23, 1855 | " | Feb. 23, 1913 | 60 00 | 12 " | 720 00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montreal | Que. | Gen'l P. Office | W. Filiatreault | May 22, | 1873 | P. elev. attend. | Jan. 23, | 1913 | 60 | 00 | 12 | months | 720 00 |
| " | " | " | J. B. Richot | Jan. 14, | 1869 | " | Feb. 25, | 1913 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | A. Trudeau | April 13, | 1866 | Frt. elev. attend. | Jan. 17, | 1908 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | Ls. Brault | Dec. 29, | 1854 | " | Sept. 1, | 1901 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | C. Varin | May 13, | 1883 | " | Jan. 21, | 1911 | 55 | 00 | 12 | " | 660 00 |
| " | " | " | A. Archambault | July 6, | 1869 | " | Nov. 29, | 1912 | 50 | 00 | 12 | " | 600 00 |
| " | " | " | H. Davis | May 26, | 1862 | " | Dec. 10, | 1913 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | H. Decaire | April 13, | 1877 | " | Dec. 23, | 1913 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | J. Bennett | Oct. 15, | 1878 | " | Sept. 3, | 1913 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | T. Hughes | Feb. 4, | 1872 | " | Sept. 3, | 1913 | 35 | 00 | 12 | " | 420 00 |
| " | " | " | A. Teasdale | May 17, | 1892 | " | Aug. 17, | 1914 | 55 | 00 | 12 | " | 660 00 |
| " | " | " | J. McClanaghan | Mar. 14, | 1860 | Mess. Govt. R. | July 2, | 1902 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | T. MacMahon | Mar. 6, | 1866 | Electrician | Dec. 3, | 1911 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | G. Robert | Dec. 18, | 1853 | Lobby kpr. day | July 1, | 1902 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | E. Richer | April 17, | 1872 | " | July 2, | 1912 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | J. Murphy | Dec. 18, | 1852 | Lobby kpr. night | May 19, | 1907 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | C. Berthiaume | Nov. 8, | 1870 | Watchman night | July 2, | 1902 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | T. Thompson | May 9, | 1857 | " | Aug. 1, | 1912 | 70 | 00 | 12 | " | 840 00 |
| " | " | " | P. H. Bissaillon | Oct. 18, | 1855 | Messenger | April 17, | 1913 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | J. Desautels | Oct. 25, | 1855 | Watchman | June 9, | 1913 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | M. Carey | Feb. 10, | 1878 | Store keeper | Aug. 4, | 1914 | 90 | 00 | 12 | " | 1080 00 |
| " | " | " | J. Trudeau | July 6, | 1848 | Carpenter | Nov. 1, | 1912 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | A. Vallée | Aug. 4, | 1847 | " | Aug. 4, | 1910 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | J. W. Corbeil | Nov. 8, | 1879 | " | Sept. 15, | 1912 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | J. Renaud | April 3, | 1863 | Painter | April 1, | 1910 | 80 | 00 | 12 | " | 960 00 |
| " | " | " | F. Valin | Dec. 8, | 1886 | Carpenter | June 5, | 1912 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | F. Cyr | Aug. 15, | 1852 | " | July, 10, | 1910 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | A. Gauthier | Jan. 11, | 1869 | " | Jan. 26, | 1915 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | P. Jones | Mar. 17, | 1850 | " | Oct. 8, | 1913 | 65 | 00 | 12 | " | 780 00 |
| " | " | Sta. "A" P. O | J. Quinn | June 4, | 1878 | Fireman | July 5, | 1906 | 70 | 00 | 12 | " | 840 00 |
| " | " | " | C. Prud'homme | Aug. 16, | 1884 | " | May 8, | 1912 | 65 | 00 | 12 | " | 780 00 |
| " | " | Sta. "B" P. O | T. Drolet | Mar. 11, | 1852 | Caretaker | Oct. 29, | 1908 | 54 | 17 | 12 | " | 650 00 |
| " | " | " | A. Cunningham | April 15, | 1878 | Cleaner | Jan. 2, | 1909 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | M. Dory | Jan. 30, | 1876 | " | Oct. 20, | 1913 | 50 | 00 | 12 | " | 600 00 |
| " | " | Sta. "C" P. O | N. Robillard | June 28, | 1856 | " | May 10, | 1911 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | Jos. Brunet | June 27, | 1881 | " | Oct. 7, | 1908 | 55 | 00 | 12 | " | 660 00 |
| " | " | Sta. "D" P. O | H. Filiatreault | Sept. 14, | 1870 | Caretaker | Jan. 26, | 1915 | 60 | 00 | 12 | " | 720 00 |
| " | " | Sta. "E" P. O | H. Paquette | Aug. 7, | 1858 | " | April 1, | 1912 | 60 | 00 | 12 | " | 720 00 |
| " | " | St. Henri P. O | Mrs G. Colborn | Jan. 30, | 1883 | Charwoman | Jan. 9, | 1912 | 28 | 00 | 12 | " | 336 00 |
| " | " | Hochelaga P. O | J. H. Brown, P.M. | Oct. 7, | 1851 | Caretaker | Mar. 27, | 1902 | 16 | 66 | 12 | " | 200 00 |
| " | " | Sta. "H" P. O | L. Ducharme | Nov. 25, | 1863 | Fireman | Oct. 22, | 1914 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | M. Rochford | April 25, | 1859 | " | Nov. 30, | 1914 | 65 | 00 | 12 | " | 780 00 |
| " | " | " | O. Aubin | | | Pass. elevator | Nov. 25, | 1914 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | J. H. Chartrand | Feb. 15, | 1860 | Cleaner | Nov. 25, | 1914 | 55 | 00 | 12 | " | 660 00 |
| " | " | " | Jos. Brenan | | | " | Dec. 9, | 1914 | 55 | 00 | 12 | " | 660 00 |
| " | " | " | Mrs. McCarthy | Aug. 31, | 1876 | Charwoman | Dec. 7, | 1914 | 20 | 00 | 12 | " | 240 00 |
| " | " | Sta. "L" P. O | W. A. Maltby | Dec. 29, | 1882 | Fireman | Mar. 2, | 1915 | 60 | 00 | 12 | " | 720 00 |
| " | " | " | Mrs. J. Dover | Sept. | 1870 | Charwoman | Mar. 2, | 1915 | 30 | 00 | 12 | " | 360 00 |
| Nicolet | " | Public building | U. Papillon | Mar. 16, | 1843 | Caretaker | Nov. 8, | 1907 | 43 | 33 | 12 | " | 520 00 |
| Nominingue | " | Immigration building | V. Charbonneau | April 8, | 1878 | " | April 1, | 1912 | 25 | 00 | 12 | " | 300 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at the Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly Salary. | Time Employed each year. | Yearly Salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts | | $ cts. |
| Peribonka ..... Que | Immigration building..... | E. Larouche..... | Mar. 24, 1895 | Caretaker . . | Sept. 15, 1914 | Nil | 12 months ... | Nil |
| Pierreville..... " | Public building ..... | Mrs S. G. Boucher..... | May 2, 1853 | " ..... | Dec. 17, 1909 | 12 50 | 12 " ... | 150 00 |
| Plessisville..... " | " ..... | J. O. Vallée, P.M..... | May 22, 1855 | " ..... | Nov. 1, 1912 | 10 00 | 12 " ... | 120 00 |
| Quebec..... ... . " | Ex-warehouse..... | D. P. Kennedy..... | Feb. 9, 1865 | Engineer..... | April 1, 1897 | 75 00 | 12 " ... | 900 00 |
| " . ..... " | " .. ..... | J. G. McLaughlin..... | Nov. 15, 1880 | Fireman ..... | July 4, 1906 | 60 00 | 12 " ... | 720 00 |
| " .... ..... " | Culler's office ..... | James O'Neil..... | Aug. 15, 1861 | " ..... | Aug. 1, 1894 | 45 00 | 12 " ... | 540 00 |
| " ..... " | Custom house .. .. ... | J. M. Arkinson ..... | Sep. 10, 1863 | Engineer... .. | Jan. 28, 1915 | 65 00 | 12 " ... | 780 00 |
| " ..... " | " ..... | Jos. Bigaouette ..... | May 15, 1860 | Fireman .. ..... | Feb. 14, 1914 | 55 00 | 12 " ... | 660 00 |
| " ..... .. ... " | " ..... | A. Martin ... ..... | May 20, 1875 | Elevator man.... | April 24, 1912 | 55 00 | 12 " ... | 660 00 |
| " .. ..... ... " | " ..... | O. B. Leclerc. ..... | April 15, 1873 | " ..... | July 8, 1914 | 55 00 | 12 " ... | 660 00 |
| " ..... ..... " | Post Office..... | Rod. Roy..... | Sept. 23 1878 | Caretaker..... | Feb. 16, 1910 | 66 66 | 12 " .... | 800 00 |
| " ... ..... . " | " .... ..... | S. Lortie..... .. | Aug. 9, 1849 | Watchman..... | Feb. 15, 1912 | 55 00 | 12 " .... | 650 00 |
| " ..... ..... " | " ..... | A. Poulin..... | Jan. 5. 1856 | Elevatorman.... | Mar. 1, 1912 | 50 00 | 12 " .... | 600 00 |
| " ..... .. ... " | " ..... | L. Sanfaçon..... | Sept..... | 1870 " .... | Mar. 1, 1915 | 50 00 | 12 " ... | 600 00 |
| " .. .. ..... " | " ..... | J. D. Villeneuve..... | Oct. 22, 1875 | Messenger. ... | April 17, 1907 | 50 00 | 12 " .... | 600 00 |
| " ..... " | " ..... | F. J. Cooper..... | July 8, 1858 | Fireman ..... | June 15, 1895 | 75 00 | 12 " .... | 900 03 |
| " ..... " | Gov. Gen. Quar.. .... | M. Lewis..... | May 6 1871 | Caretaker..... | Sept. 1, 1905 | $1 50 p. d. | ..... | 547 50 |
| " ..... .. ... " | P.O. St. Sauveur..... | T. Savard..... | Oct. 26, 1845 | " ..... | May 1, 1914 | 33 33 | 12 " .... | 400 00 |
| " .... ..... " | P.O. St. Roch..... | J. B. Turcotte..... | Sept. 22, 1866 | " ..... | May 7, 1910 | 41 66 | 12 " .... | 500 00 |
| " .... ..... " | Public buildings..... | D. Lortie..... | Oct. 16, 1853 | Joiner..... | Feb. 5. 1910 | $3 p. d. | ..... | 939 00 |
| " ..... ... " | " ..... | A. Petitclerc..... | Oct. 18, 1865 | " ..... | Feb. 5, 1910 | $3 p. d. | ..... | 939 00 |
| " . ..... " | " ..... | E. Lefebvre..... | Jan. 18, 1866 | " ..... | Jan. 11, 1914 | $3 p. d. | ..... | 939 00 |
| " ..... " | " ..... | J. E. Collin..... | Oct. 13, 1873 | Plumber..... | July 14, 1914 | 85 00 | 12 months.... | 1,020 00 |
| " ..... .... " | " ..... | T. Lagacé..... | June 3, 1873 | Machinist .... | Nov. 10, 1914 | 75 00 | 12 " .... | 900 00 |
| " ..... " | " ..... | A. Lacasse..... | Oct. 19, 1877 | Electrician..... | July 5, 1910 | 90 00 | 12 " .... | 1,080 00 |
| Richmond..... " | " ..... | H. Desmarais .... ... | July 14, 1869 | Caretaker. . . . | May 7, 1898 | 33 33 | 12 " .... | 400 00 |
| Rigaud..... " | " ..... | J. B. Charlebois..... | April 29, 1859 | " ..... | Oct. 23, 1912 | 12 50 | 12 " .... | 150 00 |
| " ..... " | " ... .... ... | G. Vallée..... | Mar. 26, 1856 | Asst. caretaker.. | Dec. 5, 1912 | 12 50 | 12 " .... | 150 00 |
| Rimouski..... " | " ..... | A. Lepage ..... | Jan. 24, 1863 | Caretaker. ..... | Dec. 5, 1912 | 25 00 | 12 " .... | 300 00 |
| Roberval.. .. . .... " | Post Office. .... ..... | J. Bolduc..... .... | Jan. 30, 1872 | " ..... | April 16, 1914 | 33 33 | 12 " .... | 400 00 |
| Rock Island..... " | Immigration building.... | L. A. Lanctot..... ... | Mar. 3, 1846 | " .... | Nov. 1, 1913 | 33 33 | 12 " .... | 400 00 |
| St. Hyacinthe..... " | Public building..... | F. X. Tétreault..... | Nov. 8, 1846 | " ..... | Mar. 1, 1912 | 43 33 | 12 " .... | 520 00 |
| " ..... " | Inland Revenue .. .... | E. Clapin..... ..... | April 9, 1844 | " ..... | July 19, 1904 | 33 33 | 12 " .... | 400 00 |
| St. Johns..... " | Custom house..... . .... | Leon Forrant..... . . | Jan. 21, 1849 | " ..... | April 14, 1897 | 29 16 | 12 " .... | 350 00 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| St. Johns | P.Q. | Post Office | W. Brousseau, P.M. | Aug. | 12, | 1840 | Caretaker | Mar. | 25, | 1908 | 25 | 00 | 12 | months | 300 00 |
| St. Jerome | " | " | T. Grignon | Mar. | 21, | 1859 | " | Dec. | 1, | 1911 | 33 | 33 | 12 | " | 400 00 |
| St. Lambert | " | Public building | Jos. Ste. Marie | | | 1852 | " | Dec. | 1, | 1913 | 37 | 50 | 12 | " | 450 00 |
| St. Laurent | " | " | Jos. V. Cardinal | Jan. | 26, | 1861 | " | Mar. | 28, | 1914 | 41 | 66 | 12 | " | 500 00 |
| Shawanigan | " | " | C. de Carrufel | June | 20, | 1858 | " | Sept. | 16, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Sherbrooke | " | " | O. Désève | Aug. | 6, | 1848 | " | April | 2, | 1898 | 33 | 33 | 12 | " | 400 00 |
| Sorel | " | " | J. B. Cadoret | July | 1, | 1847 | " | June | 10, | 1912 | 40 | 00 | 12 | " | 480 00 |
| Terrebonne | " | " | J. Brière | Feb. | 18, | 1861 | " | Nov. | 1, | 1911 | 25 | 00 | 12 | " | 300 00 |
| Thetford Mines | " | " | J. Guillemette, P. M. | | | 1859 | " | April | 17, | 1913 | 12 | 50 | 12 | " | 150 00 |
| Three Rivers | " | " | R. Sawyer | June | 26, | 1851 | " | Dec. | 24, | 1914 | 50 | 00 | 12 | " | 600 00 |
| " | " | " | P. Gravelle | June | 3, | 1828 | Asst. caretaker | Feb. | 1, | 1891 | 25 | 00 | 12 | " | 300 00 |
| Valleyfield | " | " | Nap. Picard | Mar. | 8, | 1847 | Caretaker | May | 2, | 1902 | 40 | 00 | 12 | " | 480 00 |
| Victoriaville | " | " | C. Thibault | June | 1, | 1861 | " | Aug. | 22, | 1912 | 25 | 00 | 12 | " | 300 00 |
| Acton | Ont. | " | Jas. Henderson | July | 28, | 1862 | " | Oct. | 23, | 1914 | 33 | 33 | 12 | " | 400 00 |
| Alexandria | " | " | D. K. McDonald | July | 4, | 1847 | " | Oct. | 17, | 1906 | 41 | 66 | 12 | " | 500 00 |
| Almonte | " | " | P. Burns | Jan. | 28, | 1861 | " | Sept. | 1, | 1907 | 33 | 33 | 12 | " | 400 00 |
| Amherstburg | " | " | R. C. Elliott, Mrs. | Dec. | 28, | 1854 | " | June | 6, | 1905 | 33 | 33 | 12 | " | 400 00 |
| Arnprior | " | " | R. Tait | Oct. | 16, | 1845 | " | Dec. | 1, | 1909 | 33 | 33 | 12 | " | 400 00 |
| Aylmer | " | " | A. A. Learn | Jan. | | 1879 | " | Feb. | 3, | 1915 | 45 | 83 | 12 | " | 540 00 |
| Barrie | " | " | R. Buchannan | Feb. | 19, | 1849 | " | Dec. | 1, | 1914 | 33 | 33 | 12 | " | 400 00 |
| Berlin | " | " | Jacob Clements | June | 21, | 1849 | " | May | 15, | 1900 | 33 | 33 | 12 | " | 400 00 |
| Belleville | " | " | S. Haight | Aug. | 26, | 1857 | " | Jan. | 24, | 1901 | 54 | 16 | 12 | " | 650 00 |
| Bowmanville | " | " | W. W. Allin | Jan. | 13, | 1850 | " | Feb. | 10, | 1905 | 37 | 50 | 12 | " | 450 00 |
| Brampton | " | " | J. Foster | Sept. | 16, | 1846 | " | Aug. | 1, | 1906 | 33 | 33 | 12 | " | 400 00 |
| Brantford | " | " | John Squire | April | 24, | 1842 | " | Oct. | 27, | 1880 | 50 | 00 | 12 | " | 600 00 |
| Brantford | " | New Public Building | C. R. Van Fleet | April | 5, | 1866 | " | Dec. | 12, | 1914 | 70 | 00 | 12 | " | 840 00 |
| " | " | " | O. Jackson | Dec. | 26, | 1859 | Engineer | Dec. | 12, | 1914 | 70 | 00 | 12 | " | 840 00 |
| " | " | " | Mrs. M. Doherty | Aug. | 26, | 1866 | Charwoman | Dec. | 12, | 1914 | 30 | 00 | 12 | " | 360 00 |
| " | " | " | " S. MacCartney | May | 19, | 1862 | " | Jan. | 11, | 1915 | 30 | 00 | 12 | " | 360 00 |
| Bridgeburg | " | Public building | Wm. Hanna | Aug. | 15, | 1863 | Caretaker | Oct. | 3, | 1905 | 29 | 16 | 12 | " | 350 00 |
| Brockville | " | " | C. F. Gray | April | 28, | 1861 | " | April | 2, | 1908 | 45 | 83 | 12 | " | 550 00 |
| Carleton Place | " | " | J. F. Halpenny | April | 17, | 1858 | " | May | 13, | 1892 | 33 | 33 | 12 | " | 400 00 |
| Cayuga | " | " | C. C. Gibson, P.M. | Feb. | 21, | 1858 | " | May | 1, | 1913 | 25 | 00 | 12 | " | 300 00 |
| Chatham | " | " | W. W. Mitchell | May | 25, | 1848 | " | Jan. | 7, | 1885 | 50 | 00 | 12 | " | 600 00 |
| Chesley | " | " | E. Maher | Aug. | 18, | 1859 | " | July | 1, | 1914 | 33 | 33 | 12 | " | 400 00 |
| Clinton | " | " | James Scott, P.M. | Jan. | 21, | 1856 | " | Feb. | 9, | 1904 | 16 | 66 | 12 | " | 200 00 |
| Cobourg | " | " | W. Russell | Sept. | 5, | 1859 | " | Feb. | 1, | 1912 | 50 | 00 | 12 | " | 600 00 |
| Cornwall | " | " | C. Rivier | Nov. | 3, | 1856 | " | May | 1, | 1912 | 37 | 50 | 12 | " | 450 00 |
| Deseronto | " | " | M. Hart | Jan. | 15, | 1862 | " | July | 1, | 1903 | 41 | 66 | 12 | " | 500 00 |
| Dresden | " | " | Jos. Humphery | Mar. | 18, | 1842 | " | May | 1, | 1915 | 33 | 33 | 12 | " | 400 00 |
| Dundas | " | " | C. Cooper, P. M. | Jan. | 7, | 1868 | " | Oct. | 31, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Elora | " | " | J. F. Huck, P.M. | Sept. | 26, | 1854 | " | June | 1, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Essex | " | " | T. Trewin | June | 27, | 1840 | " | Jan. | 14, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Fort William | " | " | John Skea | July | 20, | 1874 | " | Sept. | 1, | 1912 | 45 | 83 | 12 | " | 550 00 |
| Fergus | " | " | T. M. Broadfoot | June | 14, | 1813 | " | April | 1, | 1912 | 33 | 33 | 12 | " | 400 00 |
| Galt | " | " | Thos. Barrett | June | 17, | 1861 | " | Aug. | 1, | 1902 | 41 | 66 | 12 | " | 500 00 |
| Gananoque | " | " | H. McCalpin | June | 8, | 1845 | " | Nov. | 21, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Glencoe | " | " | E. Waterworth | Aug. | 19, | 1852 | " | Feb. | 28, | 1910 | 33 | 33 | 12 | " | 400 00 |
| Goderich | " | " | A. Christal | Feb. | 26, | 1849 | " | Dec. | 5, | 1911 | 37 | 50 | 12 | " | 450 00 |
| Grimsby | " | " | A. Sweet | Aug. | 23, | 1864 | " | May | 15, | 1914 | 33 | 33 | 12 | " | 400 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly Salary. | Time Employed each year. | Yearly Salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Guelph..... Ont. | Public building..... | N. McLean..... | Oct. 7, 1868 | Caretaker .... | Aug. 22, 1912 | 41 66 | 12 " ... | 500 00 |
| Hamilton..... " | Dominion building..... | Alex. Benzie..... | June 20, 1868 | " & Eng | Mar. 5, 1914 | 83 33 | 12 " .... | 1,000 00 |
| " ..... ..... " | " ..... | J. Wigglesworth..... | Aug. 7, 1863 | Fireman .... ... | Oct. 1, 1896 | 62 50 | 12 " .... | 750 00 |
| " ..... " | " ..... | B. Moriarty ..... | Mar. 17, 1866 | " ... .... | Dec. 31, 1911 | 62 50 | 12 " .... | 750 00 |
| " ..... ... " | " ..... | T. Nicholson..... | Dec. 17, 1857 | Elevatorman.... | Mar. 2, 1887 | 62 50 | 12 " .... | 750 00 |
| " ..... " | " ..... | Alfred Barnard..... | Dec. 27, 1847 | Asst. caretaker.. | Dec. 10, 1894 | 58 33 | 12 " .... | 700 00 |
| " ..... ... " | " ..... | Thos. Ryan ..... | Mar. 9, 1879 | Elevatorman.... | Feb. 22, 1915 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | John Smith..... | Dec. 3, 1870 | " ... | Feb. 22, 1915 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | T. C. Butler..... | Mar. 17, 1876 | Cleaner..... | June 10, 1911 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | C. Partridge..... | April 2, 1869 | " ..... | April 12, 1909 | 54 16 | 12 " .... | 650 00 |
| " ..... " | " ..... | J. J. Friggens..... .... | July 16, 1870 | " ..... | June 1, 1914 | 54 16 | 12 " .... | 650 00 |
| " ..... ... " | " ..... | Mrs. C. White..... | April 16, 1857 | " ..... | Mar. 6, 1907 | $ 1 25 | p. w. day.... | 141 00 |
| Harriston ..... " | Public building..... | J. Grisch ..... | June 19, 1856 | Caretaker. .... | Nov. 8, 1912 | 35 00 | 12 months.... | 420 00 |
| Hawkesbury..... " | " ..... | F. Dupuis ..... | Aug. 17, 1862 | " ..... | Sept. 16, 1914 | 33 33 | 12 " .... | 400 00 |
| Ingersoll..... " | " ..... .... | J. M. Paterson... .... | April 15, 1861 | " ..... | Dec. 15, 1914 | 41 66 | 12 " .... | 500 00 |
| Kenora..... " | " ..... .... | Mrs. J. Link..... | May 10, 1850 | " ..... | Dec. 7, 1901 | 33 33 | 12 " .... | 400 00 |
| Kincardine ..... " | " ..... .... | G. D. Morrison,..... | Nov. 14, 1860 | " ..... | May 17, 1910 | 20 83 | 12 " .... | 250 00 |
| Kingston..... " | Post Office..... | Jos. Kehoe..... | June 21, 1873 | " ..... | May 15, 1905 | 52 50 | 12 " .... | 630 00 |
| " ..... .... " | Custom house..... | Thos. Frizell..... | Feb. 2, 1872 | " ..... | May 11, 1914 | 60 00 | 12 " ... | 720 00 |
| " ..... ..... " | " ..... | J. S. Spencer..... ..... | Oct. 3, 1839 | Stoker ..... | Jan. 1, 1908 | 18 00 | 12 " ... | 216 00 |
| " ..... ..... " | Inland Revenue building.. | J. Lawless..... | ..... 1833 | " ..... | Feb. 8. 1908 | 41 66 | 12 " .... | 500 00 |
| ..... " | " .. | J. Longhern..... | ..... 1852 | " ..... | June 1, 1912 | 15 00 | 12 " .... | 180 00 |
| Leamington..... " | Public building..... | J. W. Ross..... | Aug. 8, 1860 | " ..... | May 8, 1911 | 37 50 | 12 " ... | 450 00 |
| Lindsay.. ..... " | " ..... | W. Healey..... | May 29, 1873 | " ..... .... | Nov. 10, 1908 | 37 50 | 12 " .... | 450 00 |
| Listowel..... " | " .. .. ... | A. Bailey..... | Dec. 18, 1846 | Caretaker..... | Nov. 28, 1912 | 33 33 | 12 " .... | 400 00 |
| London..... " | Custom house..... | M. Mulkern..... | Sept. 4, 1837 | Engineer.. .... | Sept. 18, 1888 | 50 00 | 12 " .... | 600 00 |
| " ..... " | " ..... | W. Greer... ..... .... | Oct. 12, 1839 | Caretaker..... | Mar. 16, 1884 | 50 00 | 12 " .... | 600 00 |
| " ..... " | Post Office..... .... | D. Regan..... .... .... | May 9, 1854 | Engineer, etc.... | June 1, 1912 | 50 00 | 12 " .... | 600 00 |
| " ..... ..... " | " ..... .... ... | J. Gilbank..... | Dec. 4, 1861 | Caretaker. .... | May 31, 1906 | 41 66 | 12 " .... | 500 00 |
| ..... ..... " | Carling building..... | Thos. Porter ..... | Oct. 25, 1870 | " ..... | Sept. 21, 1914 | 50 00 | 12 " ... | 600 00 |
| Marham..... " | Public building..... | Chs Wales..... | April 12, 1864 | " .... .. | Aug. 9, 1909 | 50 00 | 12 " .... | 600 00 |
| Midland..... " | " ..... | J. T. Webb..... | Dec. 9, 1865 | " .... .. | Aug. 8, 1914 | 41 66 | 12 " .... | 500 00 |
| Mitchell..... " | " ..... | F. Elliot..... | Nov. 14, 1857 | " ..... | April 18, 1913 | 33 33 | 12 " ... | 400 00 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mount Forest | Ont. | Public building | W. L. Smith | Aug. | 12, | 1839 | Caretaker | Nov. | 8, | 1912 | 30 | 00 | 12 | months | 360 00 |
| Napanee | " | " | Mrs. C. E. Webster | July | 12, | 1846 | " | Oct. | 4, | 1900 | 41 | 66 | 12 | " | 500 00 |
| Niagara Falls | " | " | J. C. Brown | June | 30, | 1862 | " | July | 1, | 1911 | 53 | 33 | 12 | " | 640 00 |
| North Bay | " | " | L. A. Gauthier | May | 15, | 1857 | " | June | 13, | 1908 | 55 | 00 | 12 | " | 660 00 |
| Orangeville | " | " | D. McPherson | April | 30, | 1851 | " | July | 15, | 1900 | 50 | 00 | 12 | " | 600 00 |
| Orillia | " | " | W. H. Baker | April | 5, | 1853 | " | Dec. | 11, | 1914 | 41 | 66 | 12 | " | 500 00 |
| Oshawa | " | " | A. W. Brodie | Sept. | 28, | 1850 | " | Dec. | 11, | 1905 | 41 | 66 | 12 | " | 500 00 |
| Owen Sound | " | " | H. Wright | Nov. | 24, | 1841 | " | Mar. | 18, | 1908 | 33 | 33 | 12 | " | 400 00 |
| Parkhill | " | " | W. H. Taylor, P.M. | Aug. | 4, | 1847 | " | May | 12, | 1910 | 16 | 66 | 12 | " | 200 00 |
| Paris | " | " | Sam Lee | Oct. | 24, | 1841 | " | July | 7, | 1902 | 50 | 00 | 12 | " | 600 00 |
| Pembroke | " | " | H. Church | Nov. | 15, | 1864 | " | Jan. | 5, | 1910 | 33 | 33 | 12 | " | 100 00 |
| Petrolea | " | " | James Shaw | June | 11, | 1842 | " | Sept. | 12, | 1904 | 37 | 50 | 12 | " | 450 00 |
| Peterborough | " | " | G. Stenton | Sept. | 17, | 1847 | " | Dec. | 7, | 1908 | 45 | 83 | 12 | " | 550 00 |
| " | " | Custom house | B. McGill | April | 4, | 1854 | " | Jan. | 1, | 1912 | 33 | 33 | 12 | " | 400 00 |
| Port Arthur | " | Public building | Jas. Siddall | Oct. | 1, | 1853 | " | May | 1, | 1913 | 45 | 83 | 12 | " | 550 00 |
| Port Colborne | " | " | Wm. Armstrong | Sept. | 9, | 1846 | " | June | 11, | 1888 | 33 | 33 | 12 | " | 400 00 |
| Port Hope | " | " | John Elliott | Oct. | 27, | 1877 | " | Feb. | 27, | 1913 | 37 | 50 | 12 | " | 450 00 |
| Port Perry | " | " | Saml. Graham | June | 8, | 1848 | " | Oct. | 21, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Prescott | " | " | G. Henry | Jan. | 9, | 1871 | " | Nov. | 7, | 1913 | 50 | 00 | 12 | " | 600 00 |
| Picton | " | " | R. Ringer | Oct. | 17, | 1831 | " | Oct. | 1, | 1912 | 33 | 33 | 12 | " | 400 00 |
| Renfrew | " | " | Robert Sim | Feb. | 10, | 1839 | " | May | 11, | 1909 | 33 | 33 | 12 | " | 400 00 |
| Sandwich | " | " | John McLeod | Sept. | 14, | 1883 | " | July | 22, | 1907 | 29 | 16 | 12 | " | 350 00 |
| Sault Ste. Marie | " | " | P. J. Racine | Dec. | 13, | 1863 | " | Sept. | 25, | 1905 | 37 | 50 | 12 | " | 450 00 |
| " | " | " | H. E. Cannon | April | 1, | 1850 | Elevatorman | Feb. | 2, | 1914 | 55 | 00 | 12 | " | 660 00 |
| Sarnia | " | " | J. H. Dyble | Aug. | 25, | 1860 | Caretaker | Nov. | 7, | 1903 | 45 | 83 | 12 | " | 550 00 |
| Seaforth | " | " | J. McLennan | April | 25, | 1855 | " | Sept. | 2, | 1913 | 33 | 33 | 12 | " | 400 00 |
| Shelburne | " | " | R. Gallaugher | April | 4, | 1846 | " | " | 4, | 1914 | 33 | 33 | 12 | " | 400 00 |
| Simcoe | " | " | N. Porter | June | 6, | 1861 | " | Nov. | 24, | 1910 | 40 | 00 | 12 | " | 480 00 |
| Smiths Falls | " | " | R. W. Lewis | Aug. | 19, | 1863 | " | Jan. | 8, | 1896 | 33 | 33 | 12 | " | 400 00 |
| Ste. Catharines | " | " | A. Clark | Sept. | 14, | 1860 | " | Dec. | 12, | 1904 | 37 | 50 | 12 | " | 450 00 |
| Ste. Mary's | " | " | W. Hoyt | May | 19, | 1856 | " | Mar. | 16, | 1908 | 33 | 33 | 12 | " | 400 00 |
| St. Thomas | " | " | G. Lutton | " | 25, | 1857 | " | April | 14, | 1903 | 37 | 50 | 12 | " | 450 00 |
| Strathroy | " | " | N. Leitch | April | 12, | 1868 | " | June | 29, | 1911 | 33 | 33 | 12 | " | 400 00 |
| Stratford | " | " | J. P. Murray | July | 29, | 1850 | " | July | 26, | 1900 | 50 | 00 | 12 | " | 600 00 |
| Tilbury | " | " | Hy. Benoit | Oct. | 26, | 1866 | " | Feb. | 19, | 1914 | 33 | 33 | 12 | " | 400 00 |
| Tilsonburg | " | " | Thos. Fero | Dec. | 19, | 1856 | " | Mar. | 9, | 1912 | 33 | 33 | 12 | " | 400 00 |
| Toronto | " | Dominion buildings | Wm. Corrigan | Oct. | 9, | 1864 | Superintendent | Oct. | 17, | 1912 | 100 | 00 | 12 | " | 1,200 00 |
| " | " | " | J. H. Rogers | Feb. | 26, | 1890 | Electrician | Sept. | 16, | 1912 | 75 | 00 | 12 | " | 900 00 |
| " | " | " | A. W. Charlton | Mar. | 19, | 1879 | " | Nov. | 15, | 1910 | 75 | 00 | 12 | " | 900 00 |
| " | " | " | Wm. Graham | " | 16. | 1840 | Carpenter | Oct. | 16, | 1896 | 75 | 00 | 12 | " | 900 00 |
| " | " | " | S. Walker | Dec. | 14, | 1880 | " | Dec. | 9, | 1912 | 75 | 00 | 12 | " | 900 00 |
| " | " | " | W. D. Wallace | " | 25, | 1881 | Window cleaner | July | 16, | 1914 | 58 | 33 | 12 | " | 700 00 |
| " | " | " | G. Auchincloss | Nov. | 16, | 1872 | " | Nov. | 24, | 1913 | 58 | 33 | 12 | " | 700 00 |
| " | " | " | Geo. Ferry | April | 6, | 1888 | " | Aug. | 10, | 1914 | 58 | 33 | 12 | " | 700 00 |
| " | " | " | O. Hamlett | Mar. | 18, | 1860 | " | Dec. | 1, | 1912 | 58 | 33 | 12 | " | 700 00 |
| " | " | Gen. post office | Jon. Somers | April | 8, | 1835 | Storekeeper | Dec. | 1, | 1890 | 66 | 66 | 12 | " | 800 00 |
| " | " | " | Rich. Eyre | Oct. | 11, | 1849 | Fireman | Mar. | 25, | 1895 | 66 | 66 | 12 | " | 800 00 |
| " | " | " | T. Letray | Aug. | 27, | 1858 | " | Oct. | 3, | 1906 | 66 | 66 | 12 | " | 800 00 |
| | " | " | T. J. Burns | May | 6, | 1864 | " | Nov. | 23, | 1912 | 66 | 66 | 12 | " | 800 00 |
| | " | " | Robt. Moore | " | 24, | 1862 | Elevatorman | Sept. | 12, | 1911 | 58 | 33 | 12 | " | 700 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time Employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Toronto ..... Ont. | Gen. post office..... | Alex. Morrice..... | April 24, 1856 | Elevatorman.... | June 18, 1911 | 58 33 | 12 months.. . | 700 00 |
| " ... ..... " | " ..... | H. McCullough..... | April 24, 1856 | " ... | June 1, 1911 | 58 33 | 12 " .... | 700 00 |
| " ... .... ... " | " ..... | W. Watson ..... | Aug. 25, 1856 | " .... | Dec. 15, 1913 | 58 33 | 12 " .... | 700 00 |
| " ..... .. " | " ..... | J. Babe ..... | April 2, 1851 | " .... | Dec. 20, 1913 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | J. McCrohan ..... | July 20, 1862 | " .... | Dec. 1913 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " .. . .. | Wm. Gribble..... | Mar 7, 1866 | Foreman cleaner | Feb. 1905 | 62 50 | 12 " .... | 750 00 |
| " ..... " | " ..... | Chas. Gregory..... | July 27, 1857 | Cleaner..... ... | Feb. 14, 1904 | 58 33 | 12 " ... | 700 00 |
| " .. ..... . . " | " ..... | Jno. Cotton,..... . . | " 31, 1864 | " ..... | Feb. 1, 1908 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | J. P. Motta..... .. | Feb. 19, 1856 | " ..... | Dec. 9, 1912 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | Geo. McCallum..... | July 8, 1868 | " ..... | Feb. 17, 1909 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | Jno. Hayes. ... ... | Oct. 9, 1857 | " ..... | Aug. 15, 1910 | 58 33 | 12 " .. | 700 00 |
| " ..... " | " ..... | Amb. McCabe..... | Sept. 6, 1873 | " ..... | June 20, 1911 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | Fred. Edwards..... | May 20, 1872 | " ..... | July 18, 1904 | 58 33 | 12 " ... | 700 00 |
| " . .. ..... " | " ..... | Thos. Russell..... ... | April 21, 1876 | " ..... | Oct. 20, 1909 | 58 33 | 12 " .... | 700 00 |
| " . ..... " | " ..... | T. J. Cosgrove ..... | Oct. 6, 1861 | " ..... ... | July 13, 1913 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " .... .... | John McCourt .. . .. | May 29, 1872 | Cleaner..... | Dec. 17, 1913 | 58 33 | 12 " .... | 700 00 |
| " ..... .... " | " ..... ... | Thos. Kerfoot ... ... | Nov. 5, 1866 | " ..... | July 23, 1914 | 58 33 | 12 " . . | 700 00 |
| " ... . .... " | " ..... .. | Ed. Hewitt..... | Oct. 23, 1876 | " ..... | Sept. 13, 1914 | 58 33 | 12 " .... | 700 00 |
| " ..... " | " ..... | T. Bridger..... | Sept. 22, 1880 | " ..... .... | Aug. 11, 1911 | 58 33 | 12 " .... | 700 00 |
| " ... ..... .. " | " Annex.... | M. McCartney..... ... | Nov. 25, 1861 | Fireman... .... | July 8, 1913 | 66 66 | 12 " ... | 800 00 |
| " ..... " | " ..... | W. Hall . ..... | Jan. 2, 1875 | " ..... | Dec. 1, 1913 | 66 66 | 12 " .... | 800 00 |
| " ..... " | Garage, etc..... | Hy. Gray..... ..... | Dec. 10, 1872 | " ..... | Nov. 19, 1912 | 62 50 | 12 " .... | 750 00 |
| " ..... " | Can. and Dom. Express.. | Bruno Marando..... | Sept. 25, 1875 | " ..... | Nov. 25, 1912 | 66 66 | 12 " .... | 800 00 |
| " .... ..... " | Ex.-warehouse..... | Jas. Cosgrove. .. ..... | Feb. 10, 1844 | Engineer.. ... | Oct. 28, 1871 | 83 33 | 12 " ... | 1,000 00 |
| " ..... " | " ..... | J. G. Matheson ..... | Oct. 15, 1865 | Asst. engineer... | Mar. 14, 1912 | 79 16 | 12 " .... | 950 00 |
| " ..... " | " ... .... | Ed. Appleton..... | Sept. 26, 1864 | Steamfitter..... | Sept. 28, 1886 | 70 83 | 12 " .... | 850 00 |
| " ..... .. . " | " ..... ... | Pat. Cussack ..... | Mar. 26, 1875 | Elevatorman.... | Sept. 20, 1907 | 62 50 | 12 " .... | 750 00 |
| " ..... ..... " | " ..... .... | Jas. Cashen..... | June 28, 1866 | " .... | July 25, 1906 | 62 50 | 12 " .... | 750 00 |
| " ..... ..... " | " ..... ... | F. W. Colbey..... | Feb. 24, 1876 | " .... | June 4, 1912 | 62 50 | 12 " .... | 750 00 |
| " ..... " | " ..... | Thos. Collis..... | Nov. 5, 1872 | " ... | July 15, 1912 | 58 33 | 12 " .... | 700 00 |
| " . .. ..... " | " .... .... | Wm. Stringer..... ... | Jan. 22, 1881 | Cleaner..... | Oct. , 1905 | 58 33 | 12 " ... | 700 00 |
| " ..... " | " ..... | A. E. Hales... ..... | July 8, 1881 | " ..... | May 1, 1906 | 58 33 | 12 " .... | 700 00 |
| " ... ..... " | Custom house..... | Ed. Major... ..... | Sept. 9, 1864 | " ..... | Dec. 10, 1912 | 58 33 | 12 " .... | 700 00 |
| . .. ..... " | " ..... . | W. H. Pearce..... ... | April 29, 1862 | Fireman..... | Dec. 4, 1911 | 66 66 | 12 " .... | 800 00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toronto | Ont. | Custom House | Thos. Jones | Nov. | 10, | 1853 | Watchman | April | 4, | 1912 | 58 | 33 | 12 months | 700 00 |
| " | " | " | T. J. Enright | Oct. | 24, | 1862 | Caretaker | Dec. | 18, | 1906 | 54 | 16 | 12 " | 650 00 |
| " | " | " | Pat. Cassidy | May | 2, | 1862 | Fireman | May | 8, | 1906 | 66 | 66 | 12 " | 800 00 |
| " | " | " | F. Simpson | Jan. | 5, | 1859 | Watchman | Sept. | 1, | 1903 | 58 | 33 | 12 " | 700 00 |
| " | " | " | Wm. Scott | Oct. | 17, | 1838 | " | May | 10, | 1903 | $2 | p.d. | | 730 00 |
| " | " | " | Thos. Davidson | June | 20, | 1861 | Elevatorman | April | 22, | 1911 | 58 | 33 | 12 " | 700 00 |
| " | " | " | Wm. Murphy | Sept. | 16, | 1868 | Cleaner | Sept. | 28, | 1905 | 58 | 33 | 12 " | 700 00 |
| " | " | " | Hy. Somers | Mar. | , | 1851 | " | Mar. | 3, | 1907 | 58 | 33 | 12 " | 700 00 |
| " | " | " | James McCarron | July | 21 | 1871 | " | Jan. | 31, | 1911 | 58 | 33 | 12 " | 700 00 |
| " | " | " | John Duckworth | Dec. | 27, | 1880 | " | July | 17, | 1910 | 58 | 33 | 12 " | 700 00 |
| " | " | Inland Revenue | Chas. Baillie | Sept. | 22, | 1852 | Fireman | Jan. | 13, | 1891 | 54 | 16 | 12 " | 650 00 |
| " | " | P. O. Sta. "A" | Jno. Gormaly | Nov. | 26, | 1872 | Elevatorman | Oct. | 31, | 1901 | 62 | 50 | 12 " | 750 00 |
| " | " | " | E. F. Tooze | Dec. | 8, | 1865 | " | Dec. | 15, | 1909 | 62 | 50 | 12 " | 750 00 |
| " | " | " | O. Johnston | July | 18, | 1874 | " | Feb. | 14, | 1910 | 62 | 50 | 12 " | 750 00 |
| " | " | " "C" | James Rae | Feb. | 17, | 1864 | Caretaker | Jan. | 12, | 1884 | 52 | 08 | 12 " | 625 00 |
| " | " | " "D" | I. Devins | Feb. | 18, | 1847 | " | Feb. | 3, | 1905 | 52 | 08 | 12 " | 625 00 |
| " | " | " "F" | J. W. Thornton | April | 11, | 1867 | Fireman & clean | Apri | 7, | 1907 | 62 | 50 | 12 " | 750 00 |
| " | " | " " | J. J. Clarke | | | 1869 | Cleaner | Dec. | 11, | 1914 | 58 | 33 | 12 " | 700 00 |
| " | " | " "K" | Jas. Kirkwood | Dec. | 9, | 1850 | Caretaker | Dec. | 9, | 1912 | 45 | 83 | 12 " | 550 00 |
| Trenton | " | Public building | John Potter | June | 20, | 1840 | " | April | 1, | 1912 | 37 | 50 | 12 " | 450 00 |
| Uxbridge | " | " | M. Linton | April | 18, | 1863 | " | Oct. | 3, | 1913 | 33 | 33 | 12 " | 400 00 |
| Walkerton | " | " | Mrs. Thos. Gibson | Jan. | 21, | 1841 | " | May | 12, | 1905 | 33 | 33 | 12 " | 400 00 |
| Waterloo | " | " | Geo. Suggitt | Aug. | 28, | 1846 | " | June | 13, | 1913 | 33 | 33 | 12 " | 400 00 |
| Welland | " | " | D. McIlvride | May | 16, | 1876 | " | June | 9, | 1910 | 41 | 66 | 12 " | 500 00 |
| Whitby | " | " | John Ard | Aug. | 19, | 1854 | " | May | 1, | 1913 | 37 | 50 | 12 " | 450 00 |
| Windsor | " | " | W. Millier | Mar. | 27, | 1857 | " | Mar. | 24, | 1915 | 37 | 50 | 12 " | 450 00 |
| " | " | " | Israel Bellepercbe | Oct. | 26, | 1848 | Engineer | Dec. | 24, | 1907 | 54 | 16 | 12 " | 650 00 |
| Winghan | " | " | P. Fisher, P.M. | Dec. | 12, | 1832 | Caretaker | Nov. | 19, | 1906 | 16 | 66 | 12 " | 200 00 |
| Woodstock | " | " | Robert Kerr | June | 6, | 1864 | " | Dec. | 11, | 1901 | 50 | 00 | 12 " | 600 00 |
| Brandon | Man. | " | Jos. Quackenbush | June | 14, | 1857 | " | Dec. | 1, | 1912 | 85 | 00 | 12 " | 1,020 00 |
| Dauphin | " | " | G. Broadfoot | Jan. | 1, | 1853 | " | Jan. | 1, | 1911 | 45 | 00 | 12 " | 540 00 |
| Emerson | " | " | H. Pennock | Sept. | 12, | 1871 | " | July | 1, | 1912 | 41 | 66 | 12 " | 500 00 |
| Minnedosa | " | " | Thos. Devlin | Nov. | 27, | 1856 | " | Mar. | 1, | 1914 | 58 | 33 | 12 " | 700 00 |
| Morden | " | " | E. Ball | Dec. | 28, | 1858 | " | Feb. | 23, | 1914 | 60 | 00 | 12 " | 720 00 |
| Neepawa | " | " | P. McCrea | July | 8, | 1851 | " | Sept. | 1, | 1913 | 65 | 00 | 12 " | 780 00 |
| Portage la Prairie | " | " | Hy. Johns | July | 25, | 1840 | " | Aug. | 1, | 1912 | 45 | 00 | 12 " | 540 00 |
| " | " | New " | T. C. Jackson | Feb. | 25, | 1859 | " | Sept. | 1, | 1913 | 37 | 50 | 12 " | 450 00 |
| Selkirk | " | " | Jas. Massey | Sept. | 15, | 1859 | " | April | 1, | 1911 | 55 | 00 | 12 " | 660 00 |
| Souris | " | " | T. Summerfield | Mar. | 12, | 1858 | " | Jan. | 29, | 1912 | 37 | 50 | 12 " | 450 00 |
| St. Boniface | " | " | J. A. S. Chaussé | Aug. | 20, | 1867 | " | Oct. | 1, | 1908 | 55 | 00 | 12 " | 660 00 |
| Virden | " | Public building | G. H. Stonedge | Nov. | 25, | 1886 | " | Nov. | 25, | 1914 | 45 | 83 | 12 " | 550 00 |
| Winnipeg | " | Custom house | M. McIvor | Nov. | 12, | 1867 | Engineer | Oct. | 15, | 1909 | 75 | 00 | 12 " | 900 00 |
| " | " | " " | Joseph Contu | May | 10, | 1843 | Elevatorman | Mar. | 16, | 1887 | 65 | 00 | 12 " | 780 00 |
| " | " | " " | A. Boiteau | Sept. | 23, | 1860 | Ngt. watchman | April | 4, | 1905 | 60 | 00 | 12 " | 720 00 |
| " | " | " " | B. Waserman | | | 1866 | Cleaner | Feb. | 23, | 1912 | 65 | 00 | 12 " | 780 00 |
| " | " | " " | M. Hawkins | Jan. | 17, | 1850 | " | April | 1, | 1914 | 60 | 00 | 12 " | 720 00 |
| " | " | " " | A. W. Murdock | Mar. | 20, | 1879 | Fireman | Oct. | 1, | 1914 | 60 | 00 | 12 " | 720 00 |
| " | " | " " | P. Rondeau | Aug. | 11, | 1880 | " | Feb. | 14, | 1913 | 70 | 00 | 12 " | 840 00 |
| " | " | " " | W. W. Cherry | July | 27, | 1861 | Patrolman | May | 19, | 1914 | 90 | 00 | 12 " | 1,080 00 |
| " | " | New post office | W. J. Smith | Mar. | 27, | 1863 | Caretaker | Mar. | 31, | 1910 | 65 | 00 | 12 " | 780 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoists Attendants, and Watchmen employed at Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time Employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Winnipeg, Man. | New post office | Jos. Hay | May 4, 1853 | Engineer | July 20, 1905 | 90 00 | 12 months | 1,080 00 |
| " " | " " | G. Buchanan | April 6, 1843 | Fireman | Nov. 20, 1911 | 70 00 | 12 " | 840 00 |
| " " | " " | A. Sabine | Sept. 10, 1862 | " | Oct. 1, 1913 | 70 00 | 12 " | 840 00 |
| " " | " " | Chas. Hoocy | July 17, 1862 | " | Oct. 1, 1914 | 70 00 | 12 " | 840 00 |
| " " | " " | J. Watterson | Apri. 11, 1882 | " | Jan. 31, 1912 | 70 00 | 12 " | 840 00 |
| " " | " " | W. Thorarinson | Feb. 10, 1874 | Elevatorman | July 10, 1908 | 65 00 | 12 " | 780 00 |
| " " | " " | F. Jenkins | Feb. 21, 1874 | " | July 10, 1908 | 65 00 | 12 " | 780 00 |
| " " | " " | P. Handel | 1860 | " | April 1, 1913 | 65 00 | 12 " | 780 00 |
| " " | " " | Ed. Hood | Aug. 5, 1885 | " | April 15, 1914 | 65 00 | 12 " | 780 00 |
| " " | " " | G. J. Cummings | Jan. 18, 1883 | " | June 7, 1914 | 65 00 | 12 " | 780 00 |
| " " | " " | Mrs. M. Pugsley | Oct. 13, 1857 | Cleaner | Sept. 19, 1912 | 95 00 | 12 " | 1,140 00 |
| " " | " " | Mrs. E. Fentrell | July 5, 1860 | " | April 17, 1910 | 94 00 | 12 " | 1,128 00 |
| " " | " " | Mrs. E. J. Buck | Dec. 24, 1861 | " | Sept. 1, 1909 | 24 00 | 12 " | 288 00 |
| " " | " " | Expert Oriental Window Cleaning Co | | " | | 12 50 | 12 " | 150 00 |
| " " | New ex.-warehouse | Wm. Clark | Oct. 8, 1868 | Engineer | July 1, 1908 | 85 00 | 12 " | 1,020 00 |
| " " | " | J. Saunders | Oct. 25, 1848 | Fireman | Nov. 23, 1908 | 70 00 | 12 " | 840 00 |
| " " | " | John Kennedy | April 1, 1867 | " | Oct. 6, 1910 | 65 00 | 12 " | 780 00 |
| " " | " | H. Cox | July 5, 1883 | Elevatorman | Mar. 10, 1914 | 65 00 | 12 " | 780 00 |
| " " | " | A. H. Smith | 1843 | " | May 8, 1912 | 65 00 | 12 " | 780 00 |
| " " | " | J. Knott | Jan. 21, 1864 | " | Oct. 6, 1910 | 65 00 | 12 " | 780 00 |
| " " | " | C. E. Corbet | May 20, 1854 | " | Aug. 25, 1914 | 65 00 | 12 " | 780 00 |
| " " | " | S. . Jeffery | April 9, 1878 | Caretaker | Oct. 6, 1910 | 80 00 | 12 " | 960 00 |
| " " | " | F. Burns | 1870 | Fireman | Oct. 25, 1912 | 65 00 | 12 " | 780 00 |
| " " | Station "B" P. O | John Lamb | Nov. 6, 1849 | Caretaker | May 16, 1908 | 60 00 | 12 " | 720 00 |
| " " | Public building | J. M. Scott | 1886 | Electrician | April 1, 1914 | 100 00 | 12 " | 1,200 00 |
| " " | " | Jas. Newton | Mar. 14, 1863 | " | Oct. 7, 1912 | 85 00 | 12 " | 1,020 00 |
| " " | " | J. Gottskalkson | June 29, 1854 | Carpenter | Feb. 23, 1914 | 75 00 | 12 " | 900 00 |
| " " | " | W. Shields | Sept. 3, 1852 | Patrolman | Mar. 28, 1913 | 100 00 | 12 " | 1,200 00 |
| " " | Station "C" P. O | Mrs. Julia Marke | Feb. 18, 1866 | Caretaker | Aug. 14, 1914 | 25 00 | 12 " | 300 00 |
| " " | " "D" " | A. Chalmers | Dec. 6, 1858 | " | Dec. 1, 1913 | 25 00 | 12 " | 300 00 |
| " " | Grain Laboratory | Mrs. E. A. Brand | Mar. 1879 | Cleaner | Oct. 20, 1914 | 20 00 | 12 " | 240 00 |
| " " | C. H. and P. O | Miss R. Bagshawe | 1866 | " | Feb. 15, 1905 | 85 00 | 12 " | 1,020 00 |
| " " | Post office | M. Herczuk | 1876 | | 1910 | 5 00 | 12 " | 60 00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Winnipeg | Man. | Post Office | Tini Sarham | | | Cleaner | | 20 | 00 | 12 | months | | 240 00 |
| " | " | Custom house | Mrs. M. E. Tittle | Sept. | 21, 1868 | " | June 13, 1912 | 70 | 00 | 12 | " | | 840 00 |
| " | " | Immigration building | P. C. Devy | July | 10, 1877 | Elevatorman | Feb. 9, 1912 | 65 | 00 | 12 | " | | 780 00 |
| " | " | " | J. Johnson | Nov. | 11, 1865 | " | Sept. 20, 1912 | 65 | 00 | 12 | " | | 780 00 |
| Calgary | Alta. | P. O. building | W. A. English | Mar. | 24, 1874 | Caretaker | Feb. 25, 1913 | 90 | 00 | 12 | " | | 1,080 00 |
| " | " | " | Thos. Gall | Mar. | 7, 1876 | Asst. caretaker | Dec. 11, 1911 | 65 | 00 | 12 | " | | 780 00 |
| Edmonton | " | " | W. A. Clark | Sept. | 9, 1868 | Caretaker | May 9, 1913 | 75 | 00 | 12 | " | | 900 00 |
| " | " | New post office | J. Knowles | Sept. | 21, 1860 | Elevatorman | July 18, 1913 | 60 | 00 | 12 | " | | 720 00 |
| " | " | " | Lorenzo Cantera | Aug. | 10, 1880 | " | Dec. 22, 1913 | 60 | 00 | 12 | " | | 720 00 |
| " | " | " | Geo. Hutton | Feb. | 8, 1878 | Caretaker | July 16, 1913 | 75 | 00 | 12 | " | | 900 00 |
| " | " | " | W. Maloy | July | 18, 1866 | Fireman | Feb. 1, 1915 | 70 | 00 | 6 | " | | 420 00 |
| " | " | " | A. Adamson | June | 20, 1891 | " | Nov. 1, 1913 | 70 | 00 | 12 | " | | 840 00 |
| " | " | " | A. Osborne | Nov. | 23, 1868 | " | Oct. 1, 1913 | 70 | 00 | 12 | " | | 840 00 |
| " | " | " | W. C. Hoey | Oct. | 4, 1859 | Elevatorman | July 13, 1913 | 60 | 00 | 12 | " | | 720 00 |
| " | " | " | F. Lovell | April | 13, 1883 | Asst. caretaker | April 1, 1912 | 70 | 00 | 12 | " | | 840 00 |
| " | " | " | Geo. Lovell | Feb. | 19, 1879 | Cleaner | Aug. 1, 1912 | 70 | 00 | 12 | " | | 840 00 |
| " | " | Dominion lands | J. Duggan | April | 19, 1871 | Caretaker | Nov. 27, 1909 | 25 | 00 | 12 | " | | 300 00 |
| Lethbridge | " | Public building | W. C. Norman | Feb. | 7, 1876 | " | Dec. 14, 1909 | 50 | 00 | 12 | " | | 600 00 |
| " | " | New public building | W. Sloan | April | 1, 1854 | " | Jan. 8, 1915 | 75 | 00 | 12 | " | | 900 00 |
| " | " | " | Jas. Bisset | Nov. | 14, 1859 | Fireman | Jan. 8, 1915 | 65 | 00 | 6 | " | | 390 00 |
| Medicine Hat | " | " | Thos. Taylor | Oct. | 31, 1875 | " | May 1, 1912 | 75 | 00 | 12 | " | | 900 00 |
| " | " | " | T. Bridge | Feb. | 19, 1880 | Asst. caretaker | June 1, 1914 | 60 | 00 | 12 | " | | 720 00 |
| " | " | " | Jas. Hoag | | | Fireman | | 60 | 00 | 6 | " | | 360 00 |
| Red-Deer | " | Court house, etc | L. Grossith | Jan. | 24, 1883 | Caretaker | July 1, 1912 | 65 | 00 | 12 | " | | 780 00 |
| Strathcona | " | Public building | Hy. Rickard | Nov. | 13, 1867 | " | Aug. 1, 1912 | 75 | 00 | 12 | " | | 900 00 |
| Wetaskiwin | " | " | N. S. Angus | Sept. | 27, 1879 | " | April 1, 1914 | 50 | 00 | 12 | " | | 600 00 |
| Battleford | Sask. | " | E. M. Webb | July | 26, 1875 | " | Jan. 17, 1912 | 45 | 00 | 12 | " | | 540 00 |
| Battleford North | " | " | B. Dye | Oct. | 31, 1864 | " | Dec. 12, 1913 | 45 | 00 | 12 | " | | 540 00 |
| Estevan | " | " | R. Murray | Sept. | 27, 1856 | " | May 23, 1910 | 45 | 00 | 12 | " | | 540 00 |
| Humboldt | " | " | N. Kingsley | April | 23, 1856 | " | Jan. 1, 1913 | 50 | 00 | 12 | " | | 600 00 |
| Lloydminster | " | " | A. H. Bramhall P.M. | Aug. | 3, 1864 | " | Nov. 14, 1913 | 45 | 00 | 12 | " | | 540 00 |
| Maple Creek | " | " | W. A. Douglass | Feb. | 27, 1856 | " | June 25, 1909 | 16 | 66 | 12 | " | | 200 00 |
| Melford | " | " | E. W. McCrea | June | 5, 1837 | " | Mar. 3, 1913 | 50 | 00 | 12 | " | | 600 00 |
| Moosejaw | " | Post office | R. West | Sept. | 12, 1855 | " | Sept. 21, 1906 | 54 | 16 | 12 | " | | 650 00 |
| " | " | " | W. Potts | April | 27, 1864 | Fireman | April 22, 1914 | 50 | 00 | 12 | " | | 600 00 |
| " | " | " | J. Smalley | | | Cleaner | Feb. 20, 1914 | 50 | 00 | 12 | " | | 600 00 |
| " | " | " | Jas. Irwin | Dec. | 25, 1876 | Elevatorman | Aug. 31, 1914 | 50 | 00 | 12 | " | | 600 00 |
| " | " | " | W. H. Ballam | July | 23, 1863 | Constable | Nov. 13, 1914 | 50 | 00 | 12 | " | | 600 00 |
| Prince Albert | " | Public building | E. Collins | Aug. | 13, 1878 | Caretaker | Feb. 1, 1913 | 75 | 00 | 12 | " | | 900 00 |
| " | " | " | Mrs. A. Whitefor | | 1893 | Charwoman | " 1, 1913 | 30 | 00 | 12 | " | | 360 00 |
| " | " | " | Mrs. S. Thomas | Oct. | 13, 1887 | " | Mar. 1, 1915 | 30 | 00 | 12 | " | | 360 00 |
| " | " | " | John Thomas | Feb. | 21, 1883 | Fireman | Oct. 1, 1914 | 60 | 00 | 6 | " | | 360 00 |
| " | " | Baker's building | Mrs. W. Walker | July | 8, 1874 | Charwoman | " 1, 1913 | 15 | 00 | 12 | " | | 180 00 |
| Regina | " | Land office | T. Perkins | Sept. | 14, 1852 | " | Sept. 24, 1906 | 50 | 00 | 12 | " | | 600 00 |
| " | " | Post office | J. Malcolsom | Nov. | 9, 1857 | " | " 5, 1906 | 60 | 00 | 12 | " | | 720 00 |
| " | " | " | Mrs. M. Sonoski | May | 3, 1876 | Cleaner | Nov. 5, 1909 | 40 | 00 | 12 | " | | 480 00 |
| " | " | " | R. J. Corbin | April | 27, 1880 | Fireman | April 1, 1913 | 65 | 00 | 12 | " | | 780 00 |
| " | " | " | E. Shannon | | | Elevatorman | | 50 | 00 | 12 | " | | 600 00 |
| " | " | Land office | W. J. Gore | July | 24, 1863 | Caretaker | May 6, 1901 | 50 | 00 | 12 | " | | 600 00 |
| Saskatoon | " | Public building | S. H. Monk | Mar. | 20, 1889 | " | Feb. 19, 1914 | 75 | 00 | 12 | " | | 900 00 |

STATEMENT showing the Names, etc., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Wachmen employed at Dominion Public Buildings on March 31, 1915—*Continued.*

| Place. | Building. | Name. | Date of Birth. | Position. | Date of Appointment. | Monthly salary. | Time Employed each year. | Yearly salary. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | $ cts. | | $ cts. |
| Saskatoon Sask. | Public building | John Kearns | May 15, 1859 | Asst. caretaker | June 23, 1912 | 65 00 | 12 months | 780 00 |
| Weyburn " | " | Jas. Ross | Sept. 7, 1860 | Caretaker | July 1, 1913 | 45 00 | 12 " | 540 00 |
| Yorkton " | " | E. Arnsby | May 13, 1867 | Asst. caretaker | Oct. 1, 1912 | 45 00 | 12 " | 540 00 |
| Atlin B.C. | Post office | J. A. Fraser | Jan. 1, 1851 | Caretaker | June 26, 1901 | 12 50 | 12 " | 150 00 |
| Chiliwack " | Public building | S. Mellard | Sept. 24, 1854 | " | Feb. 15, 1913 | 50 00 | 12 " | 600 00 |
| Cranbrook " | " | S. Fyles | Aug. 14, 1870 | " | Jan. 27, 1913 | 65 00 | 12 " | 780 00 |
| Cumberland " | " | Thos. Cook | May 29, 1844 | " | July 7, 1910 | 54 16 | 12 " | 650 00 |
| Comox " | " | C. C. Peircy | Sept. 21, 1868 | " | Feb. 19, 1913 | 20 00 | 12 " | 240 00 |
| Duncan " | " | F. J. Wilmott | Feb. 7, 1880 | " | April 24, 1914 | 70 00 | 12 " | 840 00 |
| Fernie " | " | R. H. McEwen | Dec. 13, 1857 | " | Jan. 21, 1910 | 70 00 | 12 " | 840 00 |
| Grand Forks " | " | N. Taylor | July 19, 1863 | " | Oct. 25, 1912 | 50 00 | 12 " | 600 00 |
| Kamloops " | " | W. W. Taylor | Jan. 31, 1853 | " | Dec. 9, 1910 | 60 00 | 12 " | 720 00 |
| Ladysmith " | " | Robt. Bell | Feb. 29, 1840 | " | April 1, 1909 | 50 00 | 12 " | 600 00 |
| Nanaimo " | " | J. Stewart | Aug. 20, 1896 | " | May 1, 1912 | 65 00 | 12 " | 780 00 |
| " " | " | M. Smith | April 17, 1863 | Asst. caretaker | July 29, 1911 | 55 00 | 12 " | 660 00 |
| New Westminster " | " | L. Thornber | " 4, 1846 | Caretaker | " 11, 1906 | 70 00 | 12 " | 840 00 |
| " " | " | J. Houston | Feb. 29, 1868 | Cleaner | Mar. 11, 1914 | 70 00 | 12 " | 840 00 |
| " " | " | S. Abra | Mar. 16, 1858 | Elavatorman | " 12, 1914 | 70 00 | 12 " | 840 00 |
| " " | Indian, etc., building | A. H. Oakley | April 26, 1864 | Caretaker | Feb. 2, 1908 | 50 00 | 12 " | 600 00 |
| Nelson " | Public building | W. Linch | July 18, 1853 | " | June 1, 1911 | 50 00 | 12 " | 600 00 |
| North Vancouver " | " | J. Murray | Nov. 10, 1867 | " | Aug. 22, 1913 | 75 00 | 12 " | 900 00 |
| Port Alberni " | " | R. Venables | Sept. 28, 1866 | " | Jan. 15, 1915 | 50 00 | 12 " | 600 00 |
| Rossland " | " | H. McQuade | Dec. 14, 1851 | " | Aug. 1, 1906 | 50 00 | 12 " | 600 00 |
| Vancouver " | New public building | A. J. Chisholm | April 18, 1851 | " | Oct. 1, 1903 | 75 00 | 12 " | 900 00 |
| " " | " | D. Inches | Dec. 9, 1856 | Engineer | Feb. 1, 1909 | 95 00 | 12 " | 1,140 00 |
| " " | " | G. Wilson | June 4, 1836 | Watchman | Oct. 9, 1909 | 65 00 | 12 " | 780 00 |
| " " | " | Jos. Mulvaney | July 14, 1889 | Cleaner | April 26, 1911 | 70 00 | 12 " | 840 00 |
| " " | " | Fred. Pierrie | Mar. 26, 1891 | Elevatorman | June 1, 1913 | 65 00 | 12 " | 780 00 |
| " " | " | John Dunsmuir | Nov. 16, 1858 | Cleaner | Jan. 10, 1910 | 70 00 | 12 " | 840 00 |
| " " | " | Jas. Commeford | July 12, 1855 | " | July —, 1913 | 70 00 | 12 " | 840 00 |
| " " | " | R. W. Odlum | Nov. 21, 1865 | " | Oct. 22, 1914 | 70 00 | 12 " | 840 00 |
| " " | " | A. McLeod | | " | | 70 00 | 12 " | 840 00 |
| " " | " | R. Allen | Nov. 16, 1859 | Elevatorman | Oct. 22, 1914 | 65 00 | 12 " | 780 00 |
| " " | Postal Station "B" | Jas. Robinson | June 6, 1856 | Caretaker | Aug. 7, 1913 | 85 00 | 12 " | 1,020 00 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vancouver | B.C. | Postal station "B" | S. March | Nov. | 15, | 1880 | Cleaner | April | 18, | 1913 | 70 | 00 | 12 months | 840 00 |
| " | " | " "C" | J. D. Thompson | Jan. | 31, | 1856 | Caretaker | Sept. | 17, | 1912 | 70 | 00 | 12 " | 840 00 |
| " | " | New examin. warehouse | T. H. Robson | Mar. | 23, | 1851 | " | Sept. | 29, | 1913 | 85 | 00 | 12 " | 1,020 00 |
| " | " | " | D. H. Colman | Nov. | 19, | 1873 | Engineer | Sept. | 17, | 1913 | 110 | 00 | 12 " | 1,320 00 |
| " | " | " | Arthur Hill | June | 8, | 1875 | Cleaner | Mar. | 2, | 1914 | 70 | 00 | 12 " | 840 00 |
| " | " | " | Robert Bradley | April | 11, | 1872 | Frgt. elevator | April | 1, | 1914 | 70 | 00 | 12 " | 840 00 |
| " | " | " | R. McLennan | Oct. | 14, | 1864 | Cleaner | May | 1, | 1914 | 70 | 00 | 12 " | 840 00 |
| " | " | " | W. G. McDonald | | | 1865 | " | June | 16, | 1914 | 70 | 00 | 12 " | 840 00 |
| " | " | " | J. Sarginson | April | 1, | 1856 | " | June | 20, | 1914 | 70 | 00 | 12 " | 840 00 |
| " | " | " | W. O. Williams | Dec. | 14, | 1870 | Frgt. elevator | May | 23, | 1913 | 70 | 00 | 12 " | 840 00 |
| " | " | " | M. Churchill | June | 13, | 1854 | Cleaner | July | 8, | 1911 | 70 | 00 | 12 " | 840 00 |
| " | " | " | Thos. A. Smith | Oct. | 18, | 1874 | " | Mar. | 23, | 1911 | 70 | 00 | 12 " | 840 00 |
| " | " | " | J. McCourt | Sept. | 15, | 1865 | " | Nov. | 1, | 1912 | 70 | 00 | 12 " | 840 00 |
| Vernon | " | Public building | C. E. Mohr | April | 28, | 1853 | Caretaker | Aug. | 1, | 1913 | 70 | 00 | 12 " | 840 00 |
| Victoria | " | " | Wm. McKay | Dec. | 31, | 1857 | " | Feb. | 4, | 1898 | 110 | 00 | 12 " | 1,320 00 |
| " | " | " | W. Dick | April | 25, | 1854 | Fireman | Oct. | 1, | 1908 | 70 | 00 | 12 " | 840 00 |
| " | " | " | Thos. Fuller | May | 7, | 1876 | Asst. fireman | Dec. | 12, | 1912 | 70 | 00 | 12 " | 840 00 |
| " | " | " | John Cragg | Jan. | 18, | 1856 | Asst. caretaker | May | 1, | 1911 | 70 | 00 | 12 " | 840 00 |
| " | " | " | F. Catteral | Oct. | 22, | 1881 | Elevatorman | Dec. | 1, | 1913 | 65 | 00 | 12 " | 780 00 |
| " | " | " | J. Harris | July | 27, | 1875 | Cleaner | July | 1, | 1913 | 70 | 00 | 12 " | 840 00 |
| " | " | " | P. Dryborough | April | 18, | 1870 | " | Nov. | 20, | 1912 | 70 | 00 | 12 " | 840 00 |
| " | " | " | W. J. Gower | Sept. | 2, | 1869 | " | May | 29, | 1912 | 70 | 00 | 12 " | 840 00 |
| " | " | Old custom house | E. J. Baynton | May | 30, | 1871 | Caretaker | Dec. | 1, | 1913 | 70 | 00 | 12 " | 840 00 |
| " | " | Tempy. examin. warehouse | Albert Ward | Mar. | 9, | 1881 | " | Nov. | 1, | 1913 | 80 | 00 | 12 " | 960 00 |
| " | " | Old post office | W. G. Bowden | Mar. | 25, | 1866 | " | Oct. | 1, | 1908 | 20 | 00 | 12 " | 240 00 |
| " | " | Observatory building | F. Le Poidevin | Mar. | 28, | 1884 | " | April | 1, | 1914 | 75 | 00 | 12 " | 900 00 |
| Dawson | Y.T. | Post office | R. J. Ogburn | Sept. | 17, | 1852 | Caretaker | May | 1, | 1912 | 180 | 00 | 12 " | 2,160 00 |
| " | " | " | A. Ransley | May | 1, | 1863 | Nightman | Nov. | 1, | 1913 | 180 | 00 | 12 " | 2,160 00 |
| " | " | " | J. Wyness | Sept. | 1, | 1871 | Charman | April | 1, | 1913 | 180 | 00 | 12 " | 2,160 00 |
| " | " | Administration building | J. A. Murphy | June | 29, | 1877 | Caretaker | June | 10, | 1912 | 180 | 00 | 12 " | 2,160 00 |
| " | " | " | J. A. Craig | Oct. | 28, | 1858 | Nightman | June | 1, | 1912 | 180 | 00 | 12 " | 2,160 00 |
| " | " | " | C. Corbeil | Dec. | 28, | 1864 | Charman | June | 1, | 1912 | 180 | 00 | 12 " | 2,160 00 |
| " | " | " | J. B. Deslauriers | July | 12, | 1875 | " | June | 1, | 1906 | 160 | 00 | 12 " | 1,920 00 |
| " | " | Commissioner's residence | N. P. McDonald | Oct. | 8, | 1879 | Caretaker | Dec. | 1, | 1905 | 160 | 00 | 12 " | 1,920 00 |
| " | " | " | C. Paddock | Mar. | 19, | 1870 | Nightman | July | 1, | 1912 | 160 | 00 | 12 " | 1,920 00 |
| " | " | " | Mrs. Regina Nielson | | | | Charwoman | April | 1, | 1914 | 100 | 00 | 12 " | 1,200 00 |
| White Horse | " | Public building | C. J. McLennan | Dec. | 22, | 1850 | Caretaker | Oct. | 30, | 1902 | 125 | 00 | 12 " | 1,500 00 |
| " | " | " | J. Hume | Sept. | 10, | 1856 | Night fireman | Nov. | 15, | 1914 | 25 | 00 | 06 " | 150 00 |

JOS. VINCENT.